vtech®

VCS754

SIP Conference Phone with Wireless Mics
Administrator and Provisioning Manual

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PREFACE

Congratulations on your purchase of this VTech product. Before using this VTech product, please read *"Important Safety Information" on page 135* of this manual. Please thoroughly read this manual for all the feature operations and troubleshooting information necessary to install and operate your new VTech product. You can also visit our website at *businessphones.vtech.com* or call **1 (888) 370-2006**.

This administrator and provisioning manual contains detailed instructions for installing and configuring your VCS754 SIP Conference Phone with Wireless Mics with software version 1.0.4 or newer. See *"Using the Status menu" on page 16* for instructions on checking the software version on the VCS754. Please read this manual before installing the product.

Please print this page and record the following information regarding your product:

Model number: VCS754

Type: Small to medium business SIP-endpoint conference phone

Serial number: _____

Purchase date: _____

Place of purchase: _____

Both the model and serial numbers of your VTech product can be found on the bottom of the console.

Save your sales receipt and original packaging in case it is necessary to return your telephone for warranty service.

Text Conventions

Table 1 lists text formats and describes how they are used in this guide.

Table 1. Description of Text Conventions

Text Format	Description
Screen	Identifies text that appears on a device screen or a WebUI page in a title, menu, or prompt.
HARD KEY or **DIAL-PAD KEY**	Identifies a hard key, including the dial-pad keys.
`CallFwd`	Identifies a soft key.
Notes provide important information about a feature or procedure.	Example of a Note.
A caution means that loss of data or unintended circumstances may result.	Example of a Caution.

Audience

This guide is written for installers and system administrators. It assumes that you are familiar with networks and VoIP, both in theory and in practice. This guide also assumes that you have ordered your IP PBX equipment or service and selected which PBX features you want to implement. This guide references specific IP PBX equipment or services only for features or settings that have been designed for a specific service. Please consult your equipment supplier or service provider for recommended switches, routers, and firewall and NAT traversal settings, and so on.

As the VCS754 SIP Conference Phone with Wireless Mics becomes certified for IP PBX equipment or services, VTech may make interop guides available for those specific services. The interop guides will recommend second-party devices and settings, along with VCS754-specific configurations for optimal performance with those services. For the latest updates, visit our website at *businessphones.vtech.com*.

Related Documents

The **VCS754 Quick Start Guide** contains a quick reference guide to the VCS754 external features and brief instructions on connecting the VCS754 to a working IP PBX system.

The **VCS754 User's manual** contains a quick reference guide, full installation instructions, instructions for making and receiving calls, and a guide to all user-configurable settings.

The documents are available from our website at *businessphones.vtech.com*.

C H A P T E R   1

INTRODUCING THE VCS754

This administrator and provisioning guide contains detailed instructions for configuring the VCS754 SIP Conference Phone with Wireless Mics. Please read this guide before attempting to configure the VCS754.

Some of the functions described in this chapter are duplicated in the Web User Interface (WebUI) described in the next chapter, but if you need to assign static IP addresses, they must be set at each device.

This chapter covers:

- *"About the VCS754 conference phone" on page 9*

- *"Quick Reference Guide" on page 10*

- *"Network Requirements" on page 12*

- *"VCS754 Configuration Methods" on page 13*

About the VCS754 conference phone

The VTech VCS754 SIP Conference Phone with Wireless Mics is a full-featured business phone designed to work with popular SIP telephone (IP PBX) equipment and services. Once you have ordered and configured your SIP equipment or service, the VCS754 enable you to make and receive calls as you would with any other business phone. The VCS754 provides calling features like hold, transfer, conferencing, and speed-dial numbers

The VCS754 conference phone features include:

- 2.5-inch backlit Liquid Crystal Display

- PC speakerphone (with supplied USB cable), hold and mute

- Up to 3 SIP account registrations

- Up to 6 active SIP sessions

- 3-way conferencing

- 200-entry Call Log

You can configure the VCS754 using the menus on the phone, a browser-based interface called the WebUI, or an automatic provisioning process (see *"Provisioning Using Configuration Files" on page 76*). The WebUI enables you to configure the VCS754 using a PC that is connected to the same Local Area Network. The WebUI resides on the VCS754, and may get updated with firmware updates.

Quick Reference Guide

The external features of the VCS754 conference phone are described below.
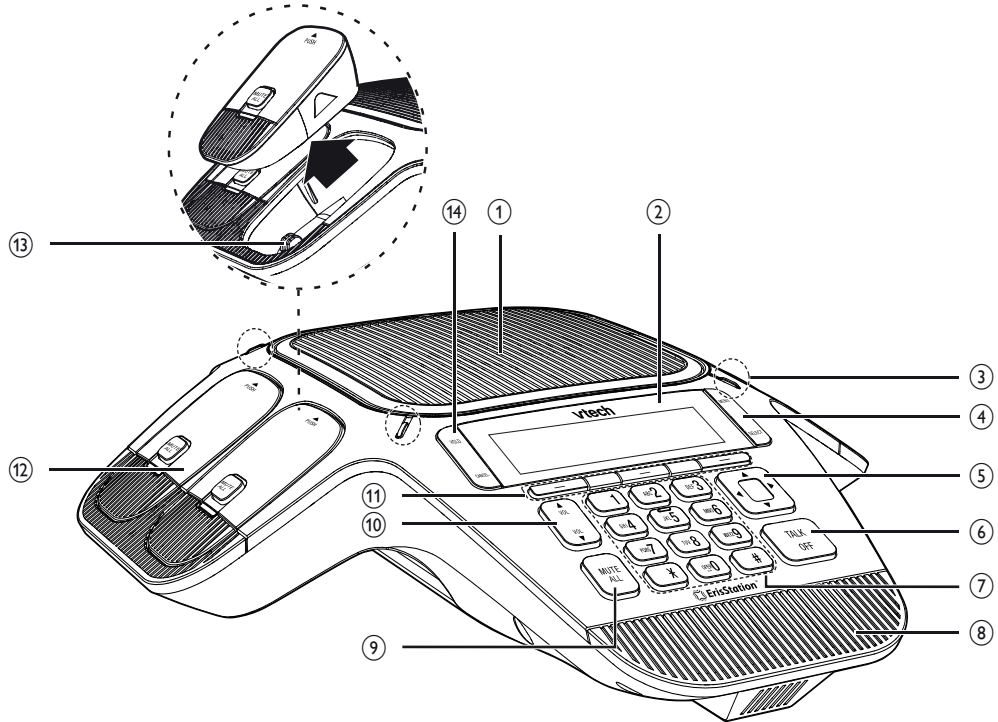
1. Speaker	2. LCD screen
3. Status indicator	4. **MENU/SELECT** key
5. Navigation keys	6. **TALK/OFF** key
7. Dialing keys	8. Front microphone
9. **MUTE ALL** key	10. **VOL** key (ringer volume and listening volume)
11. Soft keys	12. Wireless mic
13. Charging contacts	14. **HOLD/CANCEL** key
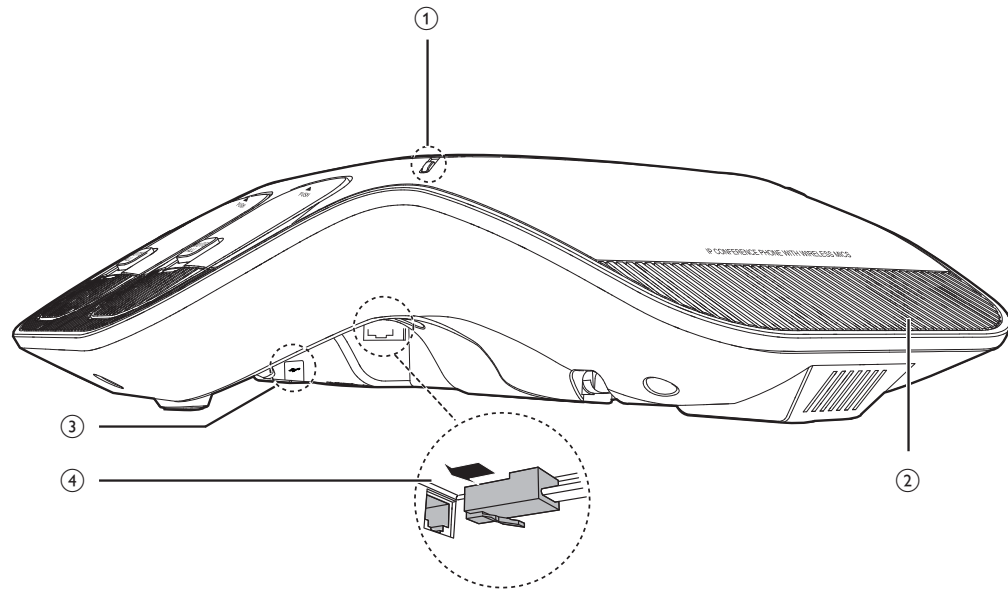
1. Status indicator   2. Rear microphone

3. USB port   4. Adapter jack

Network Requirements

A switched network topology is recommended for your LAN (using standard 10/100 Ethernet switches that carry traffic at a nominal rate of 100 Mbit/s).

The office LAN infrastructure should use Cat.-5/Cat.-5e cable.

The VCS754 requires a wired connection to the LAN. However, wireless connections to other devices (such as laptops) in your office will not impede performance.

A Dynamic Host Configuration Protocol (DHCP) server is recommended and must be on the same subnet as the VCS754 conference phones so that IP addresses can be auto-assigned. In most cases, your network router will have a DHCP server. By default, the VCS754 has DHCP enabled for automatic IP address assignment.

> **NOTE** Some DHCP servers have default settings that limit the number of network IP addresses assigned to devices on the network. You should log in to your server to confirm that the IP range is sufficient.

If no DHCP server is present, you can assign a static IP to the VCS754. You can assign a static IP address using the VCS754 menu. Go to **Admin settings > Network setting > Set static IP**. If you do not have a DHCP server or do not manually assign static IPs, you will not be able to access the WebUI and/or enable automatic time updates from an NTP server.

A DNS server is recommended to resolve the path to the Internet and to a server for firmware and configuration updates. If necessary, the system administrator can also download upgrade files and use the WebUI to update the VCS754 firmware and/or configuration settings manually.
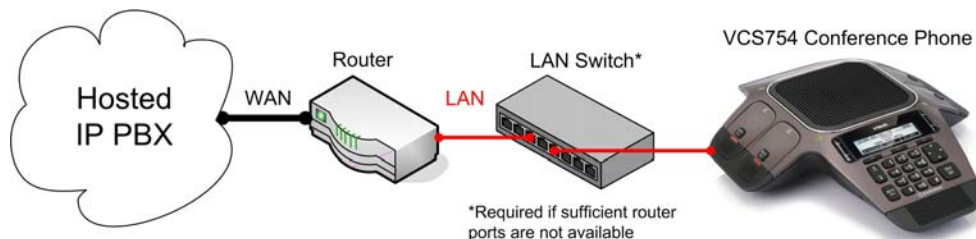
Figure 1. VCS754 Installation Example

VCS754 Configuration Methods

You can configure the VCS754 using one of the following methods:

- From the VCS754 itself, using the menus. The VCS754 menus are best suited to configuring a few settings, perhaps after the initial setup has been done. For administrators, the settings available on the VCS754 menus include network settings, account settings, and provisioning settings. See *"Using the Admin Settings Menu" on page 19*. Most of the settings accessible on the VCS754 are most useful for end users. Through the menu, they can customize the screen appearance, sounds, and manage calls. For more information, see the VCS754 User Guide.

- The Web User Interface, or WebUI, which you access using your Internet browser. See *"Using the WebUI" on page 25*. The browser-based interface is easy to navigate and best-suited to configuring a large variety of VCS754 settings. The WebUI has every setting required for configuring a single device. You can enter service provider account settings on the WebUI, and set up provisioning, which will allow you to automatically and remotely update the VCS754 after initial configuration.

- Provisioning using configuration files. Working with configuration files allows you to configure the device at regular intervals. There are several methods available to enable the VCS754 to locate and upload the configuration file. For example, you can enable the VCS754, when it starts up or reboots, to check for the presence of a configuration file on a provisioning server. If the configuration file is new or has been modified in any way, the VCS754 automatically downloads the file and applies the new settings. For more information, see *"Provisioning Using Configuration Files" on page 76*.

Customizing Soft Keys

The configuration file allows you to select which soft keys can appear on the Idle screen, the Active Call screen, the Held Call screen and the Live Dial screen. You can also specify the position of each soft key.

Some soft keys appear only under certain conditions. For example, the Line soft key on the Idle screen appears only if there is more than one registered SIP account. When a "conditional" soft key is not visible, the soft key's position is left empty.

Soft key levels with no soft keys will not be shown if there are multiple soft key levels (as indicated by the ◀ and ▶ icons). Any soft key level where all soft keys are invisible will be dynamically skipped when the user navigates through the available levels. On the VCS754, a soft key level consists of three soft keys (populated or blank) in a row.

The table below shows the soft key options available for each screen. Each screen can have a maximum of nine soft keys.

Custom soft key configuration file settings

The custom soft keys parameters are included in the "softkey" module. For more information, see *""softkey" Module: Custom Soft Key Settings" on page 128*. To modify a soft key parameter, enter values separated by commas. Soft keys appear on the phone screen in the same order as the soft key values you enter. For example, the parameter/value combination of `softkey.idle = line,dir,settings` will result in the Idle screen shown below:

```
11:09am 25/09/13
        John Smith
        2325550176
   Line  |  Dir  | Settings
```

C H A P T E R 2

CONFIGURATION USING THE PHONE MENUS

The VCS754 Main Menu has the following sub-menus:

- Features—manage calls, view and add directory entries, view call history, access messages, and use the speed dial menu.

- Status—view the VCS754 network status, account registration status, and product information.

- User Settings—allows the user to set the language for the display, configure the appearance of the display, and customize the audio settings.

- Admin Settings—configure network settings (enter static IP addresses, for example), account settings and provisioning settings.

This chapter contains instructions for using the Admin Settings menu and for accessing the Status menu. See the VCS754 User Guide for more information about the Features menu and User Settings menu.

Viewing the Main Menu

To use the VCS754 menu:

1. When the VCS754 is idle, press **MENU**.
    The **Main Menu** appears.

```
Main Menu                    ▼
1. Features
2. Status
3. User settings
```
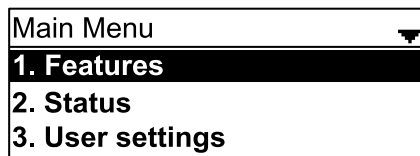
2. Press ▼ or ▲ to highlight the desired sub-menu, and then press **SELECT**.

    ■ You can also press a corresponding dial pad key to select a numbered menu item.
       Press 2 to view the **Status** menu, for example.

    ■ Press **SELECT** or an appropriate soft key to save changes.

    ■ Press **CANCEL** to cancel an operation, exit the menu display or return to the idle
       screen.

Using the Status menu

Use the **Status** menu to verify network settings and begin troubleshooting if network
problems or account registration issues affect operation.

You can also find the software version of the VCS754 on the **Product Info** screen,
available from the **Status** menu.

To view the Status menu:

1. When the VCS754 is idle, press **MENU**.

2. On the **Main Menu**, press ▲ or ▼ to highlight **Status**, and then press **SELECT**.
    The **Status** menu appears.

```
Status                       ▼
1. Network
2. Line
3. Product Info
```
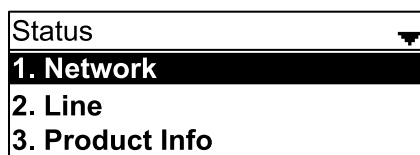
3. On the **Status** menu, press ▲ or ▼ to highlight the desired menu, and then press
    SELECT.

The available status menus are listed in Table 2.

Table 2. Status menu summary

Menu	Information listed
1. Network	■ IP address ■ DHCP status (Enabled/Disabled) ■ Subnet Mask ■ Gateway IP address ■ DNS server 1 IP address ■ DNS server 2 IP address ■ SNTP server URL ■ MAC address
2. Line	Lines and registration status. On the **Line** menu, highlight and select the desired line to view detailed line status information: ■ Line status (Registered/Not registered) ■ Account display name ■ Account User ID ■ Registrar Server IP address ■ Registrar Server port number ■ Proxy server IP address ■ Proxy server port number
3. Product Info	■ Model number ■ Serial number ■ MAC address ■ Boot version ■ Software version ■ V-Series ■ Hardware version ■ EMC version

Viewing Line status

To view line status, from the **Status** menu, select **Line**. The **Line** menu lists the available lines, along with icons indicating each line's current registration status.

```
Line                            ▼
LINE 1                          [
LINE 2                          [
LINE 3                          🚫
```
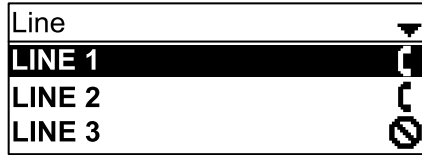
Table 3. Line status icons

Icon	Description
[	Line registered
🚫	Line not registered

To view complete status information for a line:

1. On the **Line** menu, press ▲ or ▼ to highlight the desired line, and then press **SELECT**. The full line status screen appears.

```
LINE 1                          ▼
Status:              Registered
Display name:        John Smith
User ID:             2325550176
```
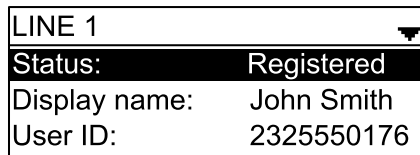
Using the Admin Settings Menu

To access the Admin Settings menu:

1. When the VCS754 is idle, press **MENU**.
   The **Main Menu** appears.

Main Menu ▼
1. Features
2. Status
3. User settings
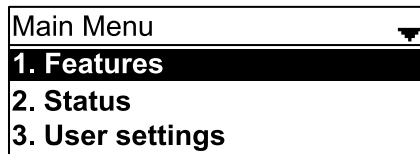
2. Press ▲ or ▼ to highlight **Admin settings**, and then press **SELECT**.

   -or-

   Press 4 (**Admin settings**) on the dial pad.

3. Use the dial pad to enter the admin password, and then press **Enter**. The default password is **admin** (press the **123** soft key to enter letters with the dial pad).

The Admin settings are listed in Table 4.

Table 4. Admin setting summary

Setting	Options
1. Network setting	1. DHCP (Enable, Disable) 2. Set static IP 3. VLAN ID 4. Others
2. Line	1. LINE 1 2. LINE 2 3. LINE 3
3. Provisioning	1. Server 2. Login 3. Password
4. Reset to default	Press **SELECT** to display a screen that allows you to reset the phone to factory default settings.
5. Restart phone	Press **SELECT** to display a screen that allows you to restart the phone.

Using the Network Setting menu

Use the Network setting menu to configure network-related settings for the VCS754. For more information about these settings, see *"Basic Network Settings" on page 48* and *"Advanced Network Settings" on page 49*.

To use the Network setting menu:

1. From the **Admin Settings** menu, press ▲ or ▼ to highlight **Network setting**, and then press **SELECT**.
    The **Network setting** menu appears.

    ```
    Network Setting           ▼
    1. DHCP
    2. Set static IP
    3. VLAN ID
    ```
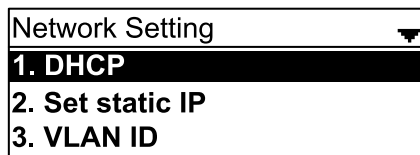
2. Press ▲ or ▼ to highlight the desired option, and then press **SELECT**:

    ■ DHCP

    ■ Set static IP

    ■ VLAN ID

    ■ Others (DNS and NTP servers).

To enable or disable DHCP:

1. From the **Network setting** menu, press ▲ or ▼ to highlight **DHCP**, and then press **SELECT**.

    The **DHCP** screen appears.

    ```
    DHCP
    DHCP:          Enabled       ◀▮▶

       Cancel                    Save
    ```
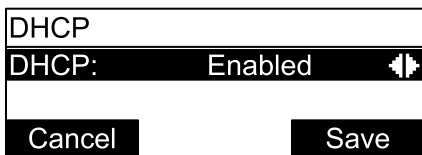
2. Press ◀ or ▶ to select **Enabled** or **Disabled**, and then press **Save** .

DHCP is enabled by default, which means the VCS754 will get its IP address from the network. When DHCP is disabled, you must enter a static IP address for the VCS754.

> **NOTE** You must be familiar with TCP/IP principles and protocols to configure static IP settings.

To set static IP for the VCS754:

1. From the **Network setting** menu, press ▲ or ▼ to highlight **Set static IP**, and then press **SELECT**.

    If DHCP is disabled, the **Set static IP** menu appears. If DHCP is enabled, an error message appears briefly before returning you to the **Network setting** menu.

2. On the **Set static IP** menu, enter the static IP address. Use the dial pad and the **Add dot** soft key to enter characters. Press ◀ or ▶ to advance to the next character.

    ```
    Set static IP               ▼
    IP:            192.168.0.100 ▮
    Subnet Mask:  255.255.255.0
     Backspc   Add dot     Save
    ```
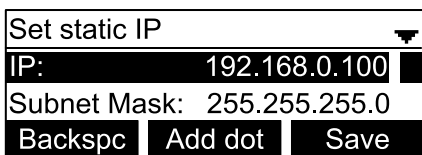
3. Press ▼ and enter the Subnet Mask. Use the dial pad and the **Add dot** soft key to enter characters. Press ◀ or ▶ to advance to the next character.

4. Press ▼ and enter the Gateway. Use the dial pad and the **Add dot** soft key to enter characters. Press ◀ or ▶ to advance to the next character.

5. Press .

To set the VLAN ID for the VCS754:

1.   From the **Network setting** menu, press ▲ or ▼ to highlight **VLAN ID**, and then press **SELECT**.

2.   On the **VLAN ID** menu, press ◄ or ► to enable or disable the WAN VLan.

```
VLAN ID                         ▼
WAN VLan:      Disabled         ◄▮►
WAN port:      0
     Cancel                  Save
```

3.   Press ▼ and enter the WAN port number. Use the dial pad and the `Backspc` soft key to enter characters. The valid range is 0 to 4095.

4.   Press ▼ and then press ◄ or ► to enable or disable the PC port VLan.

5.   Press ▼ and enter the PC port number. Use the dial pad and the `Backspc` soft key to enter characters. The valid range is 0 to 4095.

6.   Press `Save`.

To set other settings (DNS and NTP):

1.   From the **Network setting** menu, press ▲ or ▼ to highlight **Others**, and then press **SELECT**.

     If DHCP is disabled, the **Others** menu appears. If DHCP is enabled, an error message appears briefly before returning you to the **Network setting** menu.

```
Others                          ▼
DNS 1:            0.0.0.0
DNS 2:            0.0.0.0
  Backspc  │  Add dot  │   Save
```

2.   Enter the IP address for the primary DNS server. Use the dial pad and the `Add dot` soft key to enter characters. Press ◄ or ► to advance to the next character.

3.   Press ▼ and enter the IP address for the secondary DNS server. The VCS754 uses this server if the primary server does not respond.

4.   Press ▼ and enter the IP address for the NTP server. If the VCS754 does not use an NTP server, you must manually enter the time and date settings.

5.   Press `Save`.

Using the Line menu

Use the **Line** menu to configure line-specific settings for the phone.

To use the Line setting menu:

1. From the **Admin Settings** menu, press ▼ to highlight **Line**, and then press **SELECT**.The **Line** menu appears.

```
Line                              ▼
LINE 1                            [
LINE 2                            [
LINE 3                            ⦸
```
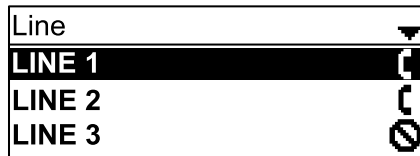
2. Highlight the desired line, if necessary, by pressing ▼, and then press **SELECT**. The full configuration menu for that line appears.

```
LINE 1                            ▼
Display name:  John Smith
User ID:            2325550176
 Backspc      123       Save
```
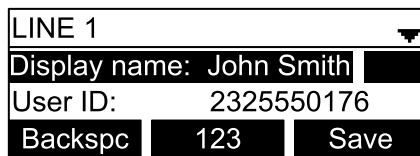
   - You can configure:
   - Display name
   - User ID
   - Authorization ID
   - Authorization Password
   - SIP Registrar Server IP
   - Registrar Server port
   - Proxy server IP
   - Proxy server port
   - Register (Yes or No)
   - Answer page (Manual or Auto)

For more information about these settings, see *"SIP Account Management" on page 30*.

3. Edit the Line settings using the dial pad and the soft keys available for each setting:

   - **Backspc**—deletes a character

   - **123**—enables you to enter numbers, lower case letters, or upper case letters using the dial pad. The soft key does not appear when the setting accepts numbers only.

   - **Save**—saves and applies the new settings

   - **Edit**—enables you to edit the setting (appears for the Password setting)

4. Press ◀ or ▶ to advance to the next character.

Using the Provisioning menu

Use the Provisioning menu to manually configure auto-provisioning settings. For more information about auto-provisioning, see *"Provisioning" on page 67* and *"Provisioning Using Configuration Files" on page 76*.

On the Provisioning menu you can configure:

- Server string—the URL of the provisioning server. The URL can include a complete path to the configuration file.

- Login ID—the username the VCS754 will use to access the provisioning server.

- Login PW—the password the VCS754 will use to access the provisioning server.

To use the Provisioning menu:

1. From the **Admin Settings** menu, press ▼ to highlight **Provisioning**, and then press **SELECT**.
   The **Provisioning** menu appears.

```
Provisioning                    ▼
Server:
Login:
    Cancel      ABC       Save
```

2. Enter the server URL using the dial pad keys:

   - **Backspc**—deletes a character

   - **ABC**—enables you to enter numbers, lower case letters, or upper case letters with the dial pad. Does not appear when the setting accepts numbers only.

   - **Save**—prompts you to reboot the phone and apply the new settings

   - **Edit**—enables you to edit the setting (appears for the Password setting)

   The format of the URL must be RFC 1738 compliant, as follows:
   "<schema>://<user>:<password>@<host>:<port>/<url-path>"

   "<user>:<password>@" may be empty.

   "<port>" can be omitted if you do not need to specify the port number.

3. Press ▼ to move to the next line and enter the Login ID for access to the provisioning server if it is not part of the server string.

4. Press ▼ to move to the next line and enter the Login password.

5. Press **Save**.

C H A P T E R   3

USING THE WEBUI

The WebUI allows you to configure all aspects of VCS754 conference phone operation, including account settings, programmable keys, network settings, contact lists, and provisioning settings. The WebUI is embedded in the VCS754 operating system. When you access the WebUI, you are accessing it on the device, not on the Internet.

This chapter describes how to access the WebUI and configure VCS754 settings. This chapter covers:

- *"Using the Web User Interface (WebUI)" on page 26*

- *"Status Page" on page 29*

- *"System Pages" on page 30*

- *"Network Pages" on page 48*

- *"Contacts Pages" on page 51*

- *"Servicing Pages" on page 62*.

Using the Web User Interface (WebUI)

The Web User Interface (WebUI) resides on the VCS754 conference phone. You can access it using an Internet browser. After you log in to the WebUI, you can configure the VCS754 on the following pages:

- System
  - SIP Account Management
  - Call settings
  - User Preferences
  - Speed Dial Keys
  - Signaling Settings
  - Ringer Settings
- Network
  - Basic Network Settings
  - Advanced Network Settings
- Contacts
  - Local Directory
  - Blacklist
  - LDAP
  - Broadsoft
  - Call History
- Servicing
  - Reboot
  - Time and Date
  - Firmware Upgrade
  - Provisioning
  - Security
  - Certificates
  - System Logs

The WebUI also has a **System Status** page, where you can view network status and general information about the VCS754. The information on this page matches the **Status** menu available on theVCS754.

To access the WebUI:

1. Ensure that your computer is connected to the same network as the VCS754.

2. Find the IP address of the VCS754:

    a. When the VCS754 is idle, press **MENU**.

    b. Press ▼ to highlight **Status**, and then press **SELECT**.

    c. With **Network** highlighted, press **SELECT**.
       The **Network** status screen appears.

    d. On the **Network** status screen, note the IP Address.

```
Network                          ▼
IP:              192.168.100.100
DHCP:         Enabled
Subnet Mask:  255.255.255.255
```

3. On your computer, open an Internet browser. (Depending on your browser, some of the pages presented here may look different and have different controls. Ensure that you are running the latest update of your preferred browser.)

4. Type the VCS754 IP address in the browser address bar and press **ENTER** on your computer keyboard.
   The browser displays a window asking for your user name and password.

5. For the user name, enter **admin**. For the password, enter the default password, **admin**. You can change the password later on the WebUI **Security** page, available under **Servicing**.

6. Click **OK**.
   The WebUI appears.

Click topics from the navigation bar along the top of the WebUI, and then click the links along the left to view individual pages. For your security, the WebUI times out after 10 minutes, so if it is idle for that time, you must log in again.

The remaining procedures in this section assume that you are already logged into the WebUI.

NOTE   The settings tables in this section contain settings that appear in the WebUI and their equivalent settings in the configuration file template. You can use the configuration file template to create custom configuration files. Configuration files can be hosted on a provisioning server and used for automatically configuring phones. For more information, see *"Provisioning Using Configuration Files" on page 76*.

Saving your settings

Most WebUI configuration pages have a [Save] button. Click [Save] to save changes you have made on the page. During a configuration session, click [Save] before you move on to the next WebUI page.

Status Page

The WebUI System Status page is equivalent to the **Status** menu on the VCS754.

System Status

The System Status page shows:

- **General** information about your device, including model, MAC address, and software version

- **Account Status** information about your SIP account registration

- **Network** information regarding your device's network address and network connection

STATUS				
System Status				
	STATUS	SYSTEM	NETWORK	CONTACTS	SERVICING

General

Model:	VCS754
Serial Number:	VU800002228
MAC Address:	00:12:2A:4B:3E:E7
Boot Version:	1.05
Software Version:	1.0.1
V-Series:	1.38.3-0-ENG
Hardware Version:	HW1.0
EMC Version:	

Account Status

Account 1:	Registered
Account 2:	Not Registered
Account 3:	Not Registered

Network

LAN Port IP Address:	10.88.52.55
IP Type:	DHCP
Subnet Mask:	255.255.0.0
Link Status:	Connected
Gateway:	10.88.3.149
Primary DNS:	10.88.162.31
Secondary DNS:	10.88.162.10
Network Time Settings:	us.pool.ntp.org

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System Pages

SIP Account Management

On the SIP Account Management pages, you can enter the account settings for each line you have ordered from your service provider.

The SIP Account settings are also available as parameters in the configuration file. See *""sip_account" Module: SIP Account Settings" on page 85*.

General Account Settings

SYSTEM					
SIP Account Management	STATUS	SYSTEM	NETWORK	CONTACTS	SERVICING
Account 1					
Account 2	**SYSTEM ACCOUNT MANAGEMENT ACCOUNT 1**				
Account 3					
Call Settings	**General Account Settings**				
Account 1					
Account 2	☑ Enable Account:				
Account 3	Display name:		John Smith		
User Preferences	User identifer:		203		
Speed Dial	Authentication name:		203		
Signaling	Authentication password:		••••••••		
Ringer	Dial plan:		x+P		
Paging Zones	Inter Digit Timeout (secs):		3		
	Maximum number of calls:		2		
	Page auto answer:		Manual		
	Feature synchronization:		Disable		
	DTMF method:		Auto		
	Unregister after reboot:		Enable		

Click the link for each setting to see the matching configuration file parameter in *"Configuration File Parameter Guide" on page 84*. Default values and ranges are listed there.

Setting	Description
Enable Account	Enable or disable the SIP account. Select to enable.
Display Name	Enter the name that will appear on the VCS754 display when account x is selected. The display name is also the text portion of the caller ID that is displayed for outgoing calls using account x.
User identifier	Enter the User identifier supplied by your service provider. The User ID, also known as the Account ID, is a SIP URI field used for SIP registration. It is also used as part of the caller ID displayed for outgoing calls. **NOTE**: Do not enter the host name (e.g. "@sipservice.com"). The WebUI automatically adds the default host name.
Authentication name	If authentication is enabled on the server, enter the authentication name (or authentication ID) for authentication with the server.

Setting	Description
Authentication password	If authentication is enabled on the server, enter the authentication password for authentication with the server.
Dial Plan	Enter the dial plan, with dialing strings separated by a | symbol. See *"Dial Plan" on page 32*.
Inter Digit Timeout (secs)	Sets how long the VCS754 waits after any "P" (pause) in the dial string or in the dial plan.
Maximum Number of Calls	Select the maximum number of concurrent active calls allowed for that account.
Page Auto Answer	When set to Auto, enables the VCS754 to automatically answer when a page is received. This is usually the desired behavior for paging.
Feature Synchronization	Enables the VCS754 to synchronize with Broadworks Application Server. Changes to features such as DND, Call Forward All, Call Forward No Answer, and Call Forward Busy on the server side will also update the settings on the VCS754 menu and WebUI. Similarly, changes made using the VCS754 or WebUI will update the settings on the server.
DTMF method	Select the default DTMF transmission method. You may need to adjust this if call quality problems are triggering unwanted DTMF tones or you have problems sending DTMF tones in general.
Unregister after reboot	Enables the phone to unregister the account(s) after rebooting-before the account(s) register again as the phone starts up. If other phones that share the same account(s) unregister unexpectedly in tandem with the rebooting VCS754, disable this setting.

Dial Plan

The dial plan consists of a series of dialing rules, or strings, that determine whether what the user has dialed is valid and when the VCS754 should dial the number.

Dialing rules must consist of the elements defined in the table below.

Element	Description
x	Any dial pad key from 0 to 9, including # and *.
[0-9]	Any two numbers separated by a hyphen, where the second number is greater than the first. All numbers within the range or valid, excluding # and *.
x+	An unlimited series of digits.
,	This represents the playing of a secondary dial tone after the user enters the digit(s) specified or dials an external call prefix before the comma. For instance, "9,xxxxxxx" means the secondary dial tone is played after the user dials 9 until any new digit is entered. "9,3xxxxxx" means only when the digit 3 is hit would the secondary dial tone stop playing.
PX	This represents a pause of a defined time; X is the pause duration in seconds. For instance, "P3" would represent pause duration of 3 seconds. When "P" only is used, the pause time is the same as the Inter Digit Timeout (see *"SIP Account Management" on page 30*).
(0:9)	This is a substitution rule where the first number is replaced by the second. For example, "(4:723)xxxx" would replace "46789" with "723-6789". If the substituted number (the first number) is empty, the second number is added to the number dialed. For example, in "(:1)xxxxxxxxxx", the digit 1 is appended to any 10-digit number dialed.
|	This separator is used to indicate the start of a new pattern. Can be used to add multiple dialing rules to one pattern edit box.

A sample dial plan appears below.

SIP Server

Server address:	10.88.25.60
Port:	5060

Registration

Server address:	10.88.25.60
Port:	5060
Expiration (secs):	3600
Registration Freq (secs):	10

Outbound Proxy

Server address:	0.0.0.0
Port:	0

Backup Outbound Proxy

Server address:	
Port:	1

SIP Server Settings

Setting	Description
Server address	Enter the IP address or domain name for the SIP server.
Server port	Enter the port number that the SIP server will use.

Registration Settings

Setting	Description
Server address	Enter the IP address or domain name for the registrar server.
Server port	Enter the port number that the registrar server will use.
Expiration	Enter the desired registration expiry time in seconds.
Registration Freq (secs)	Enter the desired registration retry frequency in seconds. If registration using the Primary Outbound Proxy fails, the Registration Freq setting determines the number of seconds before a registration attempt is made using the Backup Outbound Proxy.

Outbound Proxy Settings

Setting	Description
Server address	Enter the IP address or domain name for the proxy server.
Server port	Enter the port number that the proxy server will use.

Backup Outbound Proxy Settings

Setting	Description
Server address	Enter the IP address or domain name for the backup proxy server.
Server port	Enter the port number that the backup proxy server will use.

Audio Settings

Setting	Description
Ringer Tone	Sets the ringer tone for incoming calls on the account.
Codec priority 1	Select the codec to be used first during a call.
Codec priority 2	Select the codec to be used second during a call if the previous codec fails.
Codec priority 3	Select the codec to be used third during a call if the previous codec fails.
Codec priority 4	Select the codec to be used fourth during a call if the previous codec fails.
Codec priority 5	Select the codec to be used fifth during a call if the previous codec fails.
Enable voice encryption (SRTP)	Select to enable secure RTP for voice packets.
Enable G.729 Annex B	When G.729a/b is enabled, select to enable G.729 Annex B, with voice activity detection (VAD) and bandwidth-conserving silence suppression.

Quality of Service

Setting	Description
DSCP (voice)	Enter the Differentiated Services Code Point (DSCP) value from the Quality of Service setting on your router or switch.
DSCP (signalling)	Enter the Differentiated Services Code Point (DSCP) value from the Quality of Service setting on your router or switch.

Signaling Settings

Setting	Description
Local SIP port	Enter the local SIP port.
Transport	Select the SIP transport protocol: ■ TCP (Transmission Control Protocol) is the most reliable protocol and includes error checking and delivery validation. ■ UDP (User Datagram Protocol) is generally less prone to latency, but SIP data may be subject to network congestion. ■ TLS (Transport Layer Security)—the VCS754 supports secured SIP signalling via TLS. Optional server authentication is supported via user-uploaded certificates. TLS certificates are uploaded using the configuration file. See *""file" Module: Imported File Settings" on page 120* and consult your service provider.

Feature Access Codes Settings

Feature Access Codes

Paging:	
Call Park:	
Parked Call Retrieval:	
Voicemail:	
DND ON:	
DND OFF:	
Call Forward All ON:	
Call Forward All OFF:	
Call Forward No Answer ON:	
Call Forward No Answer OFF:	
Call Forward Busy ON:	
Call Forward Busy OFF:	
Anonymous Call Reject ON:	
Anonymous Call Reject OFF:	
Anonymous Call ON:	
Anonymous Call OFF:	
Call Waiting ON:	
Call Waiting OFF:	
Group Call Pickup:	
Direct Call Pickup:	

If your IP PBX service provider uses feature access codes, then enter the applicable codes here.

Setting	Description	Assignable to PFK?
Paging	Enter the paging access code.	Yes
Call Park	Enter the call park access code. Broadsoft provides a feature access code for the park feature. Asterisk/Metaswitch provides a parking lot extension number for the park feature. Enter the parking lot extension number here.	Yes
Parked Call Retrieval	Enter the call park retrieval access code. Broadsoft and Asterisk/Metaswitch provide a feature access code for park retrieval.	Yes
Voicemail	Enter the voicemail access code. The code is dialed when the user selects a line from the phone's Message menu.	Yes
DND ON	Enter the Do Not Disturb ON access code.	Yes
DND OFF	Enter the Do Not Disturb OFF access code.	Yes
Call Forward All ON	Enter the Call Forward All ON access code.	Yes
Call Forward All OFF	Enter the Call Forward All OFF access code.	Yes
Call Forward No Answer ON	Enter the Call Forward No Answer ON access code.	Yes

Setting	Description	Assignable to PFK?
Call Forward No Answer OFF	Enter the Call Forward No Answer OFF access code.	Yes
Call Forward Busy ON	Enter the Call Forward Busy ON access code.	Yes
Call Forward Busy OFF	Enter the Call Forward Busy OFF access code.	Yes
Anonymous Call Reject ON	Enter the Anonymous Call Reject ON access code.	No
Anonymous Call Reject OFF	Enter the Anonymous Call Reject OFF access code.	No
Anonymous Call ON	Enter the Anonymous Call ON access code.	No
Anonymous Call OFF	Enter the Anonymous Call OFF access code.	No
Call Waiting ON	Enter the Call Waiting ON access code.	No
Call Waiting OFF	Enter the Call Waiting OFF access code.	No
Group Call Pickup	Enter the Group Call Pickup code. Dialing the code enables the user to answer a call ringing at another VCS754 that is part of the same group.	Yes
Direct Call Pickup	Enter the Direct Call Pickup code. Dialing the code enables the user to answer a call ringing at another VCS754.	Yes

Voicemail Settings

Setting	Description
Enable MWI Subscription	When enabled, the account subscribes to the "message summary" event package. The account may use the User ID or the service provider's "Mailbox ID".

Setting	Description
Mailbox ID	Enter the URI for the mailbox ID. The phone uses this URI for the MWI subscription. If left blank, the User ID is used for the MWI subscription.
MWI subscription expiration	Enter the MWI subscription expiry time (in seconds) for account x.
Ignore unsolicited MWI	When selected, unsolicited MWI notifications-notifications in addition to, or instead of SUBSCRIBE and NOTIFY methods-are ignored for account x. If the VCS754 receives unsolicited MWI notifications, the Message Waiting LED will not light to indicate new messages. Disable this setting if: ■ MWI service does not involve a subscription to a voicemail server. That is, the server supports unsolicited MWI notifications. ■ you want the Message Waiting LED to indicate new messages when the VCS754 receives unsolicited MWI notifications.
Enable Stutter Dial Tone	Enables or disables the stutter dial tone for that account (indicating message(s) waiting) when the phone goes off hook.

NAT Traversal

Setting	Description
Enable STUN	Enables or disables STUN (Simple Traversal of UDP through NATs) for account x. The Enable STUN setting allows the VCS754 to identify its publicly addressable information behind a NAT via communicating with a STUN server.
Server address	Enter the STUN server IP address or domain name.
Server port	Enter the STUN server port.
Enable UDP Keep-Alive	Enables or disables UDP keep-alives. Keep-alive packets are used to maintain connections established through NAT.
Keep-alive interval (secs)	Enter the interval (in seconds) for sending UDP keep-alives.

Music On Hold

☐ Enable Local MoH

Network Conference

☐ Enable Network Conference

Conference URI:

Session Timer

☐ Enable Session Timer

Minimum value (secs): 90

Maximum value (secs): 300

Save

Music on Hold Settings

Setting	Description
Enable Local MoH	Enables or disables a hold-reminder tone that the user hears when a far-end caller puts the call on hold.

Network Conference Settings

Setting	Description
Enable Network Conference	Enables or disables network conferencing for account x.
Conference URI	Enter the URI for the network bridge for conference handling on account x.

Session Timer

Setting	Description
Enable Session Timer	Enables or disables the SIP session timer. The session timer allows a periodic refreshing of a SIP session using the RE-INVITE message.
Minimum value (secs)	Sets the session timer minimum value (in seconds) for account x.
Maximum value (secs)	Sets the session timer maximum value (in seconds) for account x.

Call Settings

You can configure call settings for each account. Call Settings include Do Not Disturb and Call Forward settings.

The call settings are also available as parameters in the configuration file. See *""call_settings" Module: Call Settings" on page 116*.

General Call Settings

Setting	Description
Anonymous Call Reject	Enables or disables rejecting calls indicated as "Anonymous."
Enable Anonymous Call	Enables or disables outgoing anonymous calls. When enabled, the caller name and number are indicated as "Anonymous."

Do Not Disturb

Setting	Description
Enable DND	Turns Do Not Disturb on or off.
Incoming calls	When set to Show, the phone displays incoming call information while Do Not Disturb is on. When set to Reject, the phone rejects incoming calls without alerting the user.

Call Forward

Setting	Description
Enable Call Forward Always	Enables or disables call forwarding for all calls on that line. Select to enable.
Target Number	Enter a number to which all calls will be forwarded.
Enable Call Forward Busy	Enables or disables forwarding incoming calls to the target number if the number of active calls has reached the maximum number of calls configured for account x.
Target Number	Enter a number to which calls will be forwarded when Call Forward Busy is enabled.
Enable Call Forward No Answer	Enables or disables call forwarding for unanswered calls on that line.
Target Number	Enter a number to which unanswered calls will be forwarded.
Delay	Select the number of rings before unanswered calls are forwarded.

User Preferences

On the User Preferences page, you can configure some basic settings for the phone and set hold reminder and call waiting settings. The User Preferences page is also available to phone users when they log on to the WebUI.

The user preference settings are also available as parameters in the configuration file. See *""user_pref" Module: User Preference Settings" on page 113*.

General User Settings

Click the link for each setting to see the matching configuration file parameter in *"Configuration File Parameter Guide" on page 84*. Default values and ranges are listed there.

Setting	Description
WebUI Language	Sets the language that appears on the WebUI. Other languages will be added in a future release.
Phone Language	Sets the language that appears on the phone. Other languages will be added in a future release.
Backlight Timer (secs)	Sets how long (in seconds) the screen backlight stays on after the last button press.
Ringer Volume	Sets the ringer volume for incoming calls. You can also use the VOLUME ▼ or ▲ keys on the VCS754.

Call Hold Reminder

Setting	Description
Enable Call Hold Reminder Tone	Enables or disables the call hold reminder tone. Select to enable.

Setting	Description
Tone Interval (secs)	Sets the interval for the call hold reminder tone, in seconds.

Call Waiting

Setting	Description
Call Waiting Off	When selected, disables incoming call notifications when the user is already on a call. Incoming calls are rejected.
Call Waiting On	When selected, enables incoming call notifications when the user is already on a call.
Enable Call Waiting Tone	Enables or disables the call waiting tone. Select to enable.
Tone Interval (secs)	Sets the interval for the call waiting tone, in seconds.

Speed Dial Keys

On the Speed Dial page, you can enter up to 10 speed dial numbers. For each speed dial number you enter, you must assign the account on which the number will be dialed out.

To dial a speed dial number, press and hold the dial pad key that matches the speed dial entry number.

The speed dial key settings are also available as parameters in the configuration file. See *""speed_dial" Module: Speed Dial Settings" on page 118*.

After entering information on this page, click [Save] to save it.

To enter speed dial numbers:

1. In the **Name** column, enter the name associated with this speed-dial entry.

2. In the **Value** column, enter a phone number for the desired key.

3. In the **Account** column, select the account that this speed dial number will use.

4. Click [Save] .

Speed Dial Keys

Click the link for each setting to see the matching configuration file parameter in *""speed_dial" Module: Speed Dial Settings" on page 118*.

Setting	Description
Name	The name associated with the speed dial entry.
Value	The phone number that the speed dial key dials when pressed and held.
Account	The SIP account that the phone will use to dial the number.

Signaling Settings

The signalling settings are also available as parameters in the configuration file. See *""network" Module: Network Settings" on page 95*.

After entering information on this page, click **Save** to save it.

Voice

Click the link for each setting to see the matching configuration file parameter in *""network" Module: Network Settings" on page 95*. Default values and ranges are listed there.

Setting	Description
Min Local RTP port	Enter the lower limit of the Real-time Transport Protocol (RTP) port range. RTP ports specify the minimum and maximum port values that the phone will use for RTP packets.
Max Local RTP port	Enter the upper limit of the RTP port range.

NAT Traversal

The NAT Traversal settings are communicated to the VoIP server so that the VCS754 is reachable when connected to the Internet behind NAT.

Setting	Description
Enable IP Masquerading	Select to enable NAT traversal and IP masquerading.
Public IP address	Enter the external IP address of your router. This setting identifies the router's public address to the VoIP server.
Public SIP port	Enter the router port number being used for SIP. This setting identifies the router's port to the VoIP server.
Min Public RTP port	Enter the lower limit of the public RTP port range.
Max Public RTP port	Enter the upper limit of the RTP port range.

Ringer Settings

The Ringer Settings enable you to provide a distinctive ringing feature via the custom Alert-Info header associated with an incoming call. This setting overrides the ringer tone you have set for the account. For example, you can set a unique ringer tone to alert the VCS754 user upon receiving any incoming calls tagged as "important" in the Alert-Info header.

The SIP Invite message contains an Alert-Info header that the phone checks in order to determine which ringer tone to play. The Alert-Info header format is as follows:

```
Alert-Info: info=info_text
```

If the header contains the "info" parameter, the phone attempts to match it to the Distinctive Ringing Text. If there is a match, the associated tone will play. If there is no match, the default tone for the account will play.

The matching is done on a "first match" basis. In the case of duplicate text strings, the ringer tone associated with the first matched entry in the Distinctive Ringing Text list will play.

The server-side configuration must be done with your service provider. This is where the SIP Invite text ("Distinctive Ringing Text") will be derived.

The ringer settings are also available as parameters in the configuration file. See .

After entering information on this page, click **Save** to save it.

Setting	Description
Distinctive Ringing Text	Enter the text that will match the "info" parameter and play the ringer tone. The matching of the "info" parameter and Distinctive Ringing Text is case sensitive. The maximum length of the Distinctive Ringing Text is 40 characters.
Tone	Select the desired ringer from the list.

Paging Zone

On the Paging Zone page, you can enter the multicast IP addresses that the phone will monitor. When a page is sent out using this multicast IP address, all phones that are programmed to monitor that IP address will receive the paging RTP stream and play the page on their speakerphone. You can also enable the phone to send out multicast pages using a particular multicast IP address.

You must first set up paging groups (each group consisting of a multicast paging IP address and assigned User IDs) on your SIP PBX. The VCS754 can monitor a maximum of 10 multicast IP addresses.

Setting	Description
Name	Enter the name of the paging zone. Names can be a maximum of 15 characters. The paging zone name is displayed on the LCD during incoming and outgoing multicast pages.
Multicast IP	Enter the paging zone multicast IP address. The IP address range for multicast addresses is 224.0.0.0–239.255.255.255.
Multicast Port	Enter the multicast port used by the multicast IP address. The valid port range is 1 to 65535.
Priority	Select the paging zone priority from 1 to 10. Zones with a priority higher than another zone can interrupt the lower-priority zone's active page. In addition, a call priority setting is available in the configuration file (page_zone.call_priority_threshold). This priority setting also ranges from 1 to 10 (2 is the default). If the paging zone priority is higher or equal to the call priority, then a multicast page can interrupt an active, dialing, or incoming call.
Enable Incoming Page	Select to enable the VCS754 to receive incoming pages for that paging zone. If the "Enable Incoming Page" checkbox is not selected, the phone will not listen for the multicast, but will still be able to broadcast an outgoing page.
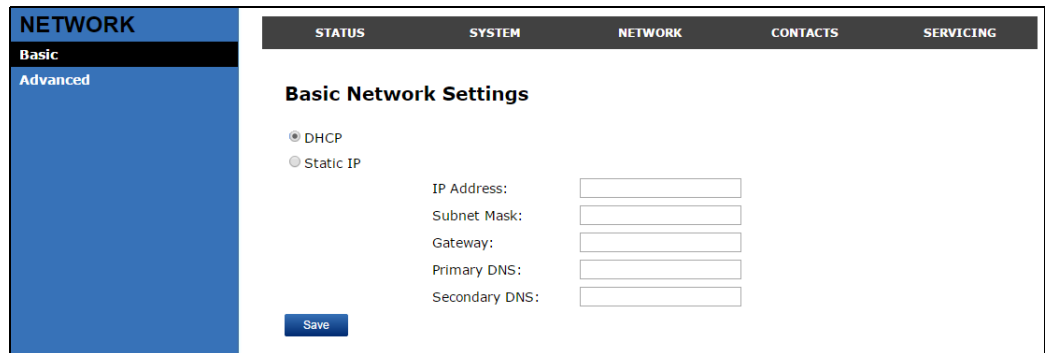
Network Pages

You can set up the VCS754 for your network configuration on the Network pages. Your service provider may require you to configure your network to be compatible with its service, and the VCS754 settings must match the network settings.

The network settings are also available as parameters in the configuration file. See *""network" Module: Network Settings" on page 95*.

After entering information on this page, click [Save] to save it.

Basic Network Settings

> **NOTE** If you disable DHCP on this page, you must configure static IP settings for the VCS754. You must be familiar with TCP/IP principles and protocols to configure static IP settings.

Basic Network Settings

Click the link for each setting to see the matching configuration file parameter in *""network" Module: Network Settings" on page 95*. Default values and ranges are listed there.

Setting	Description
DHCP	DHCP is selected (enabled) by default, which means the VCS754 will get its IP address, Subnet Mask, Gateway, and DNS Server(s) from the network.
Static IP	When Static IP is selected, you must enter a static IP address for the VCS754, as well as addresses for the Subnet Mask, Gateway, and DNS Server(s).
IP Address	If DHCP is disabled, enter a static IP address for the VCS754.
Subnet Mask	Enter the subnet mask.
Gateway	Enter the address of the default gateway (in this case, your router).

Setting	Description
Primary DNS	If DHCP is disabled or you don't wish to use the DHCP-assigned DNS server (or one specified by your service provider), enter addresses for the primary and secondary DNS servers.
Secondary DNS	

Advanced Network Settings

VLAN

You can organize your network and optimize VoIP performance by creating a virtual LAN for phones and related devices.

Click the link for each setting to see the matching configuration file parameter in *""network" Module: Network Settings" on page 95*. Default values and ranges are listed there.

Setting	Description
Enable LAN Port VLAN	Enable if the phone is part of a VLAN on your network. Select to enable.
VID	Enter the VLAN ID (vlan 5, for example).
Priority	Select the VLAN priority that matches the Quality of Service (QOS) settings that you have set for that VLAN ID. Outbound SIP packets will be marked and sent according to their priority. 7 is the highest priority. **NOTE**: Configuring QOS settings for your router or switch is a subject outside the scope of this document.
VID	Enter the PC Port VLAN ID (vlan 5, for example).

Setting	Description
Priority	Select the VLAN priority that matches the Quality of Service (QOS) settings that you have set for that VLAN ID. Outbound SIP packets will be marked and sent according to their priority. 7 is the highest priority. **NOTE**: Configuring QOS settings for your router or switch is a subject outside the scope of this document.

LLDP-MED

Setting	Description
Enable LLDP-MED	Enables or disables Link Layer Discovery Protocol for Media Endpoint Devices (LLDP-MED). LLDP-MED is a standards-based discovery protocol supported on some network switches. It is required for auto-configuration with VLAN settings.
Packet Interval (secs)	Sets the LLDP-MED packet interval (in seconds).

802.1x

Setting	Description
Enable 802.1x	Enables or disables the 802.1x authentication protocol. This protocol allows the phone to attach itself to network equipment that requires device authentication via 802.1x.
Identity	Enter the 802.1x EAPOL identity.
MD5 Password	Enter the 802.1x EAPOL MD5 password.

Contacts Pages

Local Directory

On the Local Directory page, you can manage your local directory entries. You can sort, edit, delete, and add contact information for up to 200 entries. In order to back up your contacts or import another local directory file, the page also enables you to export and import your phone's local directory.

The Local Directory lists entries on up to 10 pages, with 20 entries per page. Click [Next], [Last], [First], or a page number to view the desired page of entries.

> **NOTE** You can also use the phone menu to manage local directory entries. For more information, see the VCS754 User Guide.

Table 5 describes the buttons available on the Local Directory page.
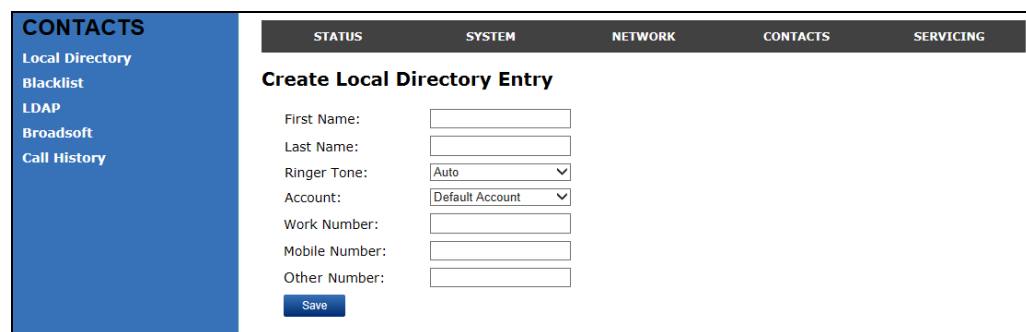
Table 5. Local Directory commands

Click	To...
Sort By Last Name	Sort the list by last name.
Edit	Edit information for an entry
Next	View the next page of entries.
Last	View the last page of entries.
First	View the first page of entries.
Delete Selected Entries	Delete selected entries from the directory. Click **Select All** to select every entry on the page you are viewing.
Add New Entry	Add a new directory entry.
Clear Directory	Delete all Directory entries.
Choose File	Import a directory file.
Export	Export the directory.

To add a new directory entry:

1. Click Add New Entry .

The **Create Local Directory Entry** page appears.

2. Enter the required information as described in the following table.

Create Local Directory Entry

Setting	Description	Range	Default
First Name	Enter the appropriate names in these fields. The maximum length of the first name and last name fields is 15 characters.	n/a	Blank
Last Name			
Ringer Tone	Sets a unique ringer tone for calls from this directory entry.	Auto, Tone 1-10	Tone 1
Account	Sets the account used when you dial this directory entry.	Default Account, Account 1-3	Default Account
Work Number	Enter the appropriate names and numbers in these fields.	n/a	Blank
Mobile Number			
Other Number			

Directory Import/Export

The best way to create a directory file for import is to first export the directory from the phone. After exporting the file, open it in an .xml editor and add or modify entries.

Importing a directory file adds the imported directory entries to existing entries. Therefore, it is possible to have duplicate entries after importing a directory file. If you are importing a "complete" directory file with the aim of replacing the entire current directory, use **Select All** and Delete Selected Entries to clear the directory before importing the file.

> **NOTE** Using the configuration file, you can set whether an imported directory file adds to existing entries or replaces existing entries. See *""file" Module: Imported File Settings" on page 120*.

Directory files are .xml files that have the following tags:

Local Directory WebUI field	Directory file XML tag
First Name	<DIR_ENTRY_NAME_FIRST>
Last Name	<DIR_ENTRY_NAME_LAST>
Work Number	<DIR_ENTRY_NUMBER_WORK>
Mobile Number	<DIR_ENTRY_NUMBER_MOBILE>
Other Number	<DIR_ENTRY_NUMBER_OTHER>
Account	<DIR_ENTRY_LINE_NUMBER>
Call Block (not on WebUI)	<DIR_ENTRY_BLOCK>
Ringer Tone	<DIR_ENTRY_RINGER>

Blacklist

On the Blacklist page, you can manage local blacklist entries. The VCS754 rejects calls from numbers that match blacklist entries. You can sort, edit, delete, and add up to 200 blacklist entries. In order to back up your blacklist entries or import another local blacklist file, the page also enables you to export and import the blacklist.

The blacklist lists entries on up to 10 pages, with 20 entries per page. Click Next , Last , First , or a page number to view the desired page of entries.

> **NOTE** You can also use the VCS754 menu to manage blacklist entries. For more information, see the VCS754 User Guide.

Table 6 describes the buttons available on the Blacklist page.

Table 6. Blacklist commands
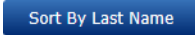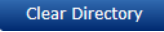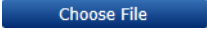
Click	To...
Sort By Last Name	Sort the list by last name.
Edit	Edit information for an entry
Next	View the next page of entries.
Last	View the last page of entries.
First	View the first page of entries.
Delete Selected Entries	Delete selected entries. Click **Select All** to select every entry on the page you are viewing.

Table 6. Blacklist commands
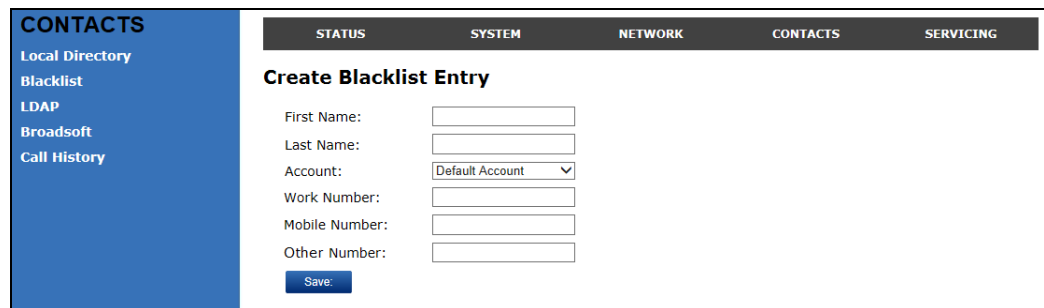
Click	To...
Add New Entry	Add a new entry.
Clear Directory	Delete all entries.
Choose File	Import a blacklist file.
Export	Export the blacklist.

To add a new blacklist entry:

1. Click Add New Entry .

   The **Create Blacklist Entry** page appears.

2. Enter the required information as described in the following table.

Create Blacklist Entry

Setting	Description	Range	Default
First Name	Enter the appropriate names in these fields. The maximum length of the first name and last name fields is 15 characters.	n/a	Blank
Last Name			
Account	Sets the account used when you dial this directory entry.	Default Account, Account 1-3	Account 1
Work Number	Enter the appropriate names and numbers in these fields.	n/a	Blank
Mobile Number			
Other Number			

Blacklist Import/Export

The best way to create a blacklist file for import is to first export the blacklist from the VCS754. After exporting the file, open it in an .xml editor and add or modify entries.

Importing a blacklist file adds the imported blacklist entries to existing entries. Therefore, it is possible to have duplicate entries after importing a blacklist file. If you are importing a "complete" blacklist file with the aim of replacing the entire current blacklist, use **Select All** and Delete Selected Entries to clear the blacklist before importing the file.

> **NOTE**
>
> Using the configuration file, you can set whether an imported blacklist file adds to or replaces existing entries. See *""file" Module: Imported File Settings" on page 120*.

Blacklist files are .xml files that have the following tags:

Blacklist WebUI field	Blacklist file XML tag
First Name	<BLACKLIST_ENTRY_NAME_FIRST>
Last Name	<BLACKLIST_ENTRY_NAME_LAST>
Work Number	<BLACKLIST_ENTRY_NUMBER_WORK>
Mobile Number	<BLACKLIST_ENTRY_NUMBER_MOBILE>
Other Number	<BLACKLIST_ENTRY_NUMBER_OTHER>
Account	<BLACKLIST_ENTRY_LINE_NUMBER>

LDAP

The phone supports remote Lightweight Directory Access Protocol (LDAP) directories. An LDAP directory is hosted on a remote server and may be the central directory for a large organization spread across several cities, offices, and departments. You can configure the phone to access the directory and allow users to search the directory for names and telephone numbers.

The LDAP settings are also available as parameters in the configuration file. See *""remoteDir" Module: Remote Directory Settings" on page 107*.

After entering information on this page, click [Save] to save it.

LDAP Settings

Click the link for each setting to see the matching configuration file parameter in *""remoteDir" Module: Remote Directory Settings" on page 107*. Default values and ranges are listed there.

Broadsoft

Setting	Description
Enable LDAP	Enables or disables the phone's access to the LDAP directory.
Directory name	Enter the LDAP directory name.
Server address	Enter the LDAP server domain name or IP address.
Port	Enter the LDAP server port.
Version	Select the LDAP protocol version supported on the phone. Ensure the protocol value matches the version assigned on the LDAP server.
Authentication scheme	Select the LDAP server authentication scheme.
Authentication name	Enter the user name or authentication name for LDAP server access.
Authentication password	Enter the authentication password for LDAP server access.
Base	Enter the LDAP search base. This sets where the search begins in the directory tree structure. Enter one of more attribute definitions, separated by commas (no spaces). Your directory may include attributes like "cn" (common name) or "ou" (organizational unit) or "dc" (domain component). For example: ou=accounting,dc=vtech,dc=com
Maximum number of entries	Sets the maximum number of entries returned for an LDAP search. Limiting the number of hits can conserve network bandwidth.
Maximum search delay	Enter the delay (in seconds) before the phone starts returning search results.
First name filter	Enter the first name attributes for LDAP searching. The format of the search filter is compliant to the standard string representations of LDAP search filters (RFC 2254).
Last name filter	Enter the last name attributes for LDAP searching. The format of the search filter is compliant to the standard string representations of LDAP search filters (RFC 2254).
Phone number filter	Enter the number attributes for LDAP searching. The format of the search filter is compliant to the standard string representations of LDAP search filters (RFC 2254).
First name attribute	Sets the attribute for first name. What you enter here should match the first name attribute for entries on the LDAP server (gn for givenName, for example). This helps ensure that the phone displays LDAP entries in the same format as the Local Directory.

Setting	Description
Last name attribute	Sets the attribute for last name. What you enter here should match the last name attribute for entries on the LDAP server (sn for surname, for example). This helps ensure that the phone displays LDAP entries in the same format as the Local Directory.
Work number attribute	Sets the attribute for the work number. What you enter here should match the work number attribute for entries on the LDAP server (telephoneNumber, for example). This helps ensure that the phone displays LDAP entries in the same format as the Local Directory.
Mobile number attribute	Sets the attribute for the mobile number. What you enter here should match the mobile number attribute for entries on the LDAP server (mobile, for example). This helps ensure that the phone displays LDAP entries in the same format as the Local Directory.
Other number attribute	Sets the attribute for the other number. What you enter here should match the other number attribute for entries on the LDAP server (otherPhone, for example). This helps ensure that the phone displays LDAP entries in the same format as the Local Directory.
Lookup for incoming calls	Enables or disables LDAP incoming call lookup. If enabled, the phone searches the LDAP directory for the incoming call number. If the number is found, the phone uses the LDAP entry for CID info.
Lookup in dialing mode	Enables or disables LDAP outgoing call lookup. If enabled, numbers entered in pre-dial or live dial are matched against LDAP entries. If a match is found, the LDAP entry is displayed for dialing.

The phone supports access to the Broadsoft Phonebook. Users can search for and call contacts that are hosted on the Broadsoft Phonebook. On the Broadsoft Phonebook Settings page, you must enter the path and credentials to enable the phone to access the Broadsoft Phonebook.

Broadsoft Phonebook Settings

Setting	Description
Enable Broadsoft Phonebook	Enables or disables the phone's access to the Broadsoft phonebook.
Display name	Enter the display name for the Broadsoft Phonebook. This name appears on the Directory list on the VCS754 menu.
Server base address	Enter the Broadsoft Phonebook server domain or IP address.
Port	Enter the Broadsoft Phonebook server port.
Authentication name	Enter the user name or authentication name for Broadsoft Phonebook access.
Authentication password	Enter the authentication password for Broadsoft Phonebook access.
Directory type	Select the directory type: Group, Group Common, Enterprise, Enterprise Common, Personal

Call History

The Call History page has no configurable settings. It displays Missed Calls, Received Calls, and Dialed Calls. Users can view their call history and "click to dial" numbers if click to dial is enabled.

Servicing Pages

Reboot

To manually reboot the VCS754 and apply settings that you have updated, click [Reboot] .
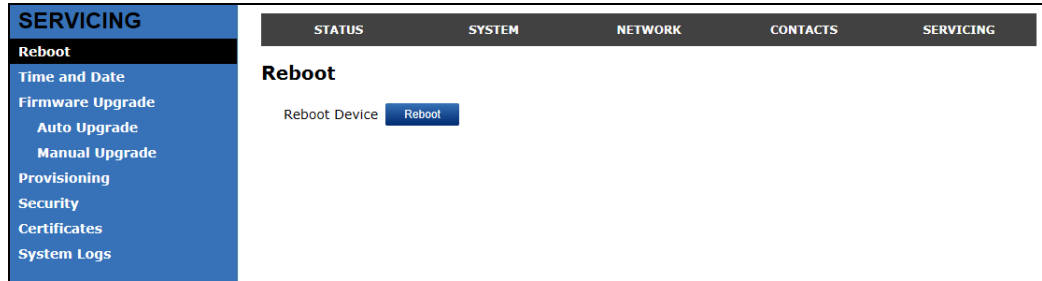
Time and Date

On the Time and Date page, you can manually set the time and date, and the time and date formats. You can also set the system time to follow a Network Time Protocol (NTP) Server (recommended) or you can set the time and date manually.

The time and date settings are also available as parameters in the configuration file. See *""time_date" Module: Time and Date Settings" on page 102*.
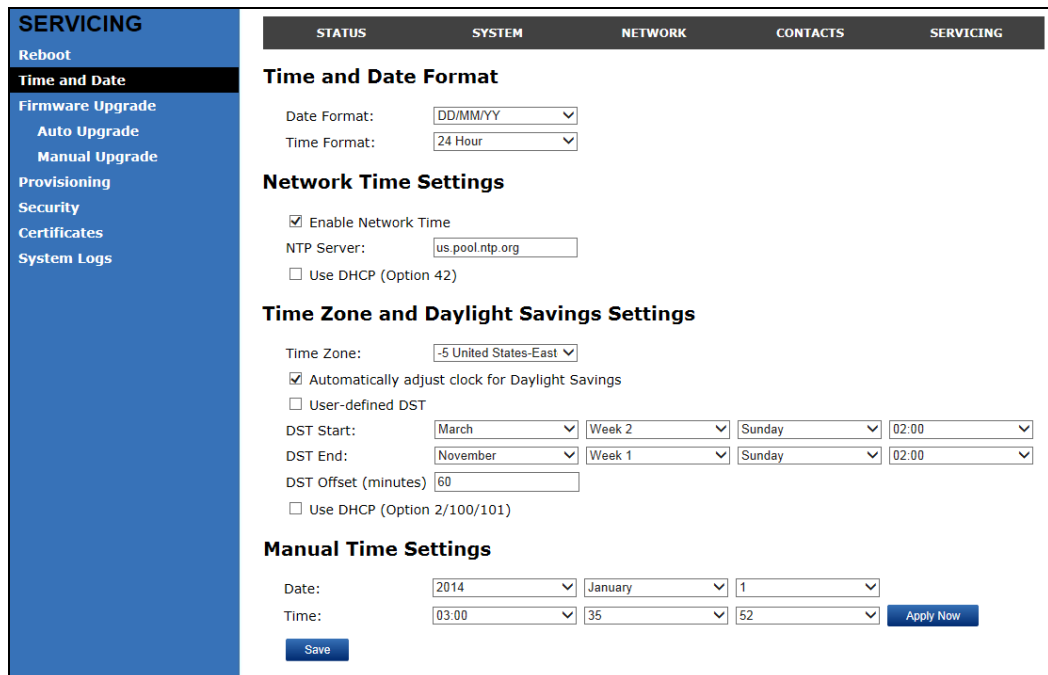
Time and Date Format

Click the link for each setting to see the matching configuration file parameter in
. Default values and ranges are
listed there.

Setting	Description
Date Format	Sets the date format.
Time Format	Sets the clock to a 24-hour or 12-hour format.

Network Time Settings

Setting	Description
Enable Network Time	Enables or disables getting time and date information for your phone from the Internet.
NTP Server	If Enable Network Time is selected, enter the URL of your preferred time server.
Use DHCP (Option 42)	If Enable Network Time is selected, select to use DHCP to locate the time server. Option 42 specifies the NTP server available to the phone. When enabled, the phone obtains the time in the following priority: 1. Option 42 2. NTP Server 3. Manual time.

Time Zone and Daylight Savings Settings

Setting	Description
Time Zone	Select your time zone from the list.
Automatically adjust clock for Daylight Savings	Select to adjust the clock for daylight savings time according to the NTP server and time zone setting. To disable daylight savings adjustment, disable both this setting and User-defined Daylight Savings Time.
User-defined DST	Select to set your own start and end dates and offset for Daylight Savings Time. To disable daylight savings adjustment, disable both this setting and Automatically adjust clock for Daylight Savings.
DST Start: Month DST Start: Week DST Start: Day DST Start: Hour	If User-defined DST is enabled, set the start date and time for daylight savings: Month, week, day, and hour.

Setting	Description
DST End: Month DST End: Week DST End: Day DST End: Hour	If User-defined DST is enabled, set the end date and time for daylight savings: Month, week, day, and hour.
Daylight Savings Offset	If User-defined DST is enabled, this specifies the daylight savings adjustment (in minutes) to be applied when the current time is between Daylight Savings Start and Daylight Savings End.
Use DHCP (Option 2/100/101)	If Enable Network Time is selected, select to use DHCP to determine the time zone offset. Options 2, 100 and 101 determine time zone information.

Manual Time Settings

If Enable Network Time is disabled or if the time server is not available, use Manual Time Settings to set the current time.

Setting	Description
Date	Select the current year, month, and day.
Time	Sets the current hour, minute, and second.

Click **Apply Now** to start the VCS754 using the manual time settings.

Firmware Upgrade

You can update the VCS754 with new firmware using the following methods:

- Retrieving a firmware update file from a remote host computer and accessed via a URL. This central location may be arranged by you, an authorized ErisTerminal dealer, or your SIP service provider. Enter the URL under **Firmware Server Settings**.

- Using a file located on your computer or local network. No connection to the Internet is required. Consult your dealer for access to firmware update files. Click **Manual Upgrade** to view the page where you can manually upgrade the VCS754 firmware.

The firmware upgrade settings are also available as parameters in the configuration file. See *""provisioning" Module: Provisioning Settings" on page 99*.

Firmware Server Settings

Click the link for each setting to see the matching configuration file parameter in *""provisioning" Module: Provisioning Settings" on page 99*. Default values and ranges are listed there.

Setting	Description
Firmware URL	The URL where the firmware update file resides. This should be a full path, including the filename of the firmware file.
Server authentication name	Authentication username for the firmware server
Server authentication password	Authentication password for the firmware server

To update the firmware immediately:

1. Click [Update Firmware Now] .
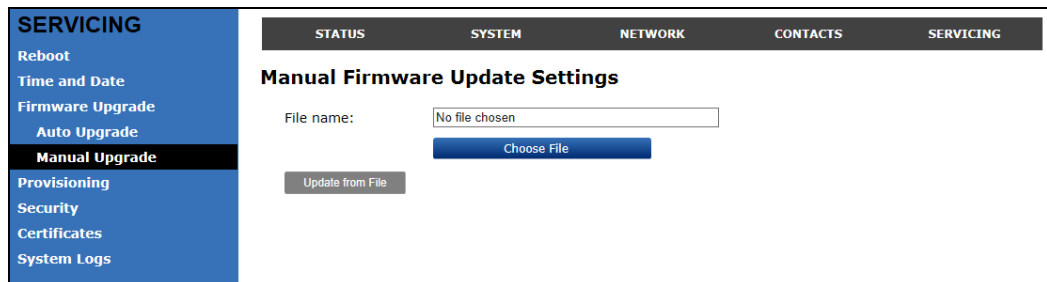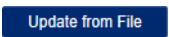
![NOTE icon] You can also configure the VCS754 to check for firmware updates at regular intervals. See *"Provisioning" on page 67*.

Manual Firmware Update and Upload

On the Manual Firmware Update Settings page, you can upgrade the VCS754 firmware using a file located on your computer or local network.

To update the firmware using a file on your computer or local network:

1. On the Manual Firmware Update page, click [Choose File] to locate and open the firmware update file.

2. Click [Update from File] .

After clicking [Update from File] the VCS754 will update its firmware and restart.

Provisioning

Provisioning refers to the process of acquiring and applying new settings for the VCS754 using configuration files retrieved from a remote computer. After a VCS754 is deployed, subsequent provisioning can update the VCS754 with new settings; for example, if your service provider releases new features. See also *"Provisioning Using Configuration Files" on page 76*.

With automatic provisioning, you enable the VCS754 to get its settings automatically—the process occurs in the background as part of routine system operation. Automatic provisioning can apply to multiple ErisTerminal products simultaneously.

With manual provisioning on the WebUI, you update the VCS754 settings (configuration and/or firmware) yourself via **Provisioning > Import Configuration** and/or **Firmware Upgrade > Manual Upgrade**. Manual provisioning can only be performed on one VCS754 at a time.

On the Provisioning page, you can enter settings that will enable the VCS754 to receive automatic configuration and firmware updates. The Provisioning page also allows you to manually update VCS754 configuration from a locally stored configuration file using an Import function. You can also export the VCS754 configuration—either to back it up or apply the configuration to another VCS754 in the future—to a file on your computer.

The provisioning process functions according to the Resynchronization settings and Provisioning Server Settings. The VCS754 checks for the provisioning URL from the following sources in the order listed below:

1. PnP—Plug and Play Subscribe and Notify protocol

2. DHCP Options

3. Preconfigured URL

If one of these sources is disabled, not available, or has not been configured, the VCS754 proceeds to the next source until reaching the end of the list.

The provisioning settings are also available as parameters in the configuration file. See *""provisioning" Module: Provisioning Settings" on page 99*.

Provisioning Settings

Setting	Description
Provisioning server	URL of the provisioning file(s). The format of the URL must be RFC 1738 compliant, as follows: "<schema>://<user>:<password>@<host>:<port>/<url-path>" "<user>:<password>@" may be empty. "<port>" can be omitted if you do not need to specify the port number.
Server authentication name	User name for access to the provisioning server
Server authentication password	Password for access to the provisioning server

Plug-and-Play Settings

Setting	Description
Enable PnP Subscribe	Select to enable the VCS754 to search for the provisioning URL via a SUBSCRIBE message to a multicast address (224.0.1.75). The VCS754 expects the server to reply with a NOTIFY that includes the provisioning URL. The process times out after five attempts.

DHCP Settings

Setting	Description
Use DHCP Options	Enables the VCS754 to use DHCP options to locate and retrieve the configuration file. When selected, the VCS754 automatically attempts to get a provisioning server address, and then the configuration file. If DHCP options do not locate a configuration file, then the server provisioning string is checked. **NOTE**: Ensure that DHCP is also enabled on the **Network > Basic** settings page.
DHCP Option Priority 1	If DHCP is enabled, sets the DHCP Option priority. Select the highest priority option.
DHCP Option Priority 2	If DHCP is enabled, sets the DHCP Option priority. Select the second highest priority option.
DHCP Option Priority 3	If DHCP is enabled, sets the DHCP Option priority. Select the third highest priority option.
Vendor Class ID (DHCP 60)	DHCP Option 60 is available to send vendor-specific information to the DHCP Server.
User Class Info (DHCP 77)	DHCP Option 77 is available to send vendor-specific information to the DHCP Server.
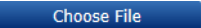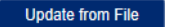
Resynchronization

Setting	Description
Mode	Sets which files the VCS754 checks for at regular intervals. It can check for configuration files, firmware update files (from the URL entered on the Firmware Server Settings page), or both. **NOTE**: When checking for both config and firmware files, the firmware URL can be within the config file. This firmware URL takes take precedence over the URL on the Firmware Server Settings page. It will also update the URL on the Firmware Server Settings page. This allows you to change the firmware URL automatically.
Bootup Check	Sets the VCS754 to check the provisioning URL for new configuration and/or firmware files upon bootup. The update is applied as part of the reboot process.
Interval	Sets an interval, in minutes, for checking for updates.
Use encryption	Enables an AES-encrypted configuration file to be decrypted before being applied to the VCS754. Select if the configuration file has been secured using AES encryption. See *"Securing configuration files with AES encryption" on page 82*.
Passphrase	If the configuration file has been secured using AES encryption, enter the 16-bit key. See *"Securing configuration files with AES encryption" on page 82*.

Import Configuration

You can configure the VCS754 by importing a configuration file from your computer or your local network. For more information about configuration file types and configuration file formatting, see *"Provisioning Using Configuration Files" on page 76*.

To import a configuration file:

1. Click [Choose File] to locate and open the configuration file.

2. Click [Update from File] .

The VCS754 will update its configuration.

Manually importing a configuration file differs from the auto-provisioning process in that:

- The VCS754 does not check whether the file has been loaded before. The configuration file is processed whether or not it is different from the current version.

- The VCS754 will restart immediately after importing the configuration file, without waiting for one minute of inactivity.

Export Configuration

You can export all the settings you have configured on the WebUI and save them as a configuration file on your computer. You can then use this configuration file as a backup, or use it to update other phones.

Under **Export Configuration**, you can also reset the phone to its default configuration.

> The exported configuration file will contain the following passwords in plain text:
> - SIP account authentication password
> - EAPOL password
> - Firmware server password
> - Provisioning server password
> - Encryption passphrase
> - LDAP server password
> - Broadsoft directory server password.
>
> Please ensure that you save the exported configuration file in a secure location.

To export the configuration file:

1. Click **Export**.

The format of the exported file is **<model name>_<mac address>.cfg**. For example, **VCS754_0011A0OCF489.cfg**.

Exporting a configuration file generates two header lines in the configuration file. These header lines provide the model number and software version in the following format:

```
#Model Number = xxxxxxx

#SW Version = xxxxxxx
```

You can use the exported file as a general configuration file, and duplicate the settings across multiple units. However, ensure that you edit the file to remove any MAC-specific SIP account settings before applying the general configuration file to other units.

Reset Configuration

You can reset the phone to its default settings.

To reset the VCS754 to its default configuration:

1. Under **Reset Configuration**, click **Reset**.
2. When the confirmation box appears, click **OK**.

Security

On the **Security** page you can reset the admin password, reset the user password, and enter web server settings.

The security settings are also available as parameters in the configuration file. See *""web" Module: Web Settings" on page 112*.

Administrator Password

You can set the administrator password on the WebUI or by using provisioning. For more information on using provisioning to set the administrator password, see *""profile" Module: Password Settings" on page 125*.

To change the admin password:

1. Enter the old password (for a new VCS754, the default password is **admin**).

2. Enter and re-enter a new password. The password is case sensitive and can consist of both numbers and letters (to a maximum of 15 characters).

3. Click Save .

User Password

You can set the user password on the WebUI or by using provisioning. For more information on using provisioning to set the user password, see *""profile" Module: Password Settings" on page 125*.

To change the User password:

1. Enter the old password (for a new VCS754, the default password is **user**).

2. Enter and re-enter a new password. The password is case sensitive and can consist of both numbers and letters (to a maximum of 15 characters).

3. Click Save .

Web Server

Setting	Description
HTTP Server port	Port used by the HTTP server.
Enable Secure Browsing	Sets the server to use the HTTPS protocol.
HTTPS Server port	Port used by the HTTPS server.

To configure Web Server Settings:

1. Enter the HTTP Server port number. The default setting is 80.

2. Enable or Disable Secure Browsing. When enabled, the HTTPS protocol is used, and you must select the HTTPS server port in the next step.

3. Enter the HTTPS server port number. The default setting is 443.

NOTE Changing the Web Server settings will reboot the VCS754.
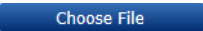
Certificates

You can upload an optional web server certificate to the VCS754 to establish a secure connection between phone and server. If a certificate is not available, the VCS754's self-signed certificate will be used during the connection transaction.

A web server certificate can also be uploaded using provisioning. For more information, see *""file" Module: Imported File Settings" on page 120*.
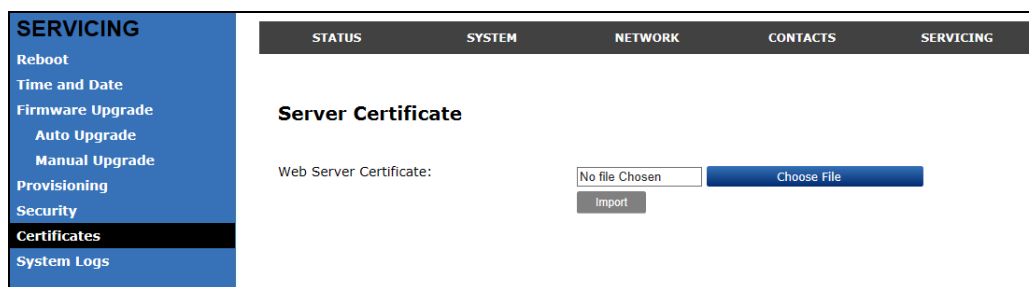
To upload a web server certificate:

1. On the Server Certificate page, click **Choose File** .

2. Locate the certificate file and click **Open**.

3. On the Server Certificate page, click **Import** .

System Logs

On the **Syslog Settings** page, you can enter settings related to system logging activities. It supports the following logging modes:

- Syslog server
- Volatile file

Under **Network Trace**, you can capture network traffic related to the phone's activity and save the capture as a .pcap file. The file can be used for diagnostic and troubleshooting purposes.

Under **Download Log**, you can save the system log to a file.

The Syslog settings are also available as parameters in the configuration file. See *""log" Module: Log Settings" on page 106*.

Syslog Settings
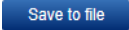
Setting	Description
Enable Syslog	Enable log output to syslog server.
Server address	Syslog server IP address.
Server port	Syslog server port.
Log Level	Sets the log level. The higher the level, the larger the debug output. ■ 5—ALL ■ 4—DEBUG ■ 3—INFO ■ 2—WARNING ■ 1—ERROR ■ 0—CRITICAL

The logging levels are:

- CRITICAL: Operating conditions to be reported or corrected immediately (for example, an internal component failure or file system error).

- ERROR: Non-urgent failures—unexpected conditions that won't cause the device to malfunction.

- WARNING: An indication that an error or critical condition can occur if action is not taken.

- INFO: Normal operational messages.

- DEBUG: Developer messages for troubleshooting/debugging purposes.

Network Trace

To perform a network trace:

1. Start a network trace by clicking   Start   . The button changes to   Stop   .

2. Stop the network trace by clicking   Stop   .

3. Save the trace by clicking   Save to file   . Your browser should prompt you to save the **capture.pcap** file.

Download Log

To download the system log:

1. Click   Save Log to file   .

2. After your browser prompts you to save the **system.log** file, save the file in the desired location.

CHAPTER 4

PROVISIONING USING CONFIGURATION FILES

Provisioning using configuration files is the quickest way to configure multiple VCS754 conference phones and other ErisTerminal products. You can place configuration files on a provisioning server, where the VCS754 conference phones retrieve the files and update their configuration automatically.

Configuration files have the extension **.cfg** and contain settings that will apply to VCS754 conference phones. To edit a configuration file, open it with a text editor such as Notepad.

The settings within a configuration file are grouped into modules. Most of the modules group their settings in the same way that settings are grouped on the VCS754 WebUI. For example, the "time_date" module in the configuration file contains the same settings that are on the **Time and Date** WebUI page. For a complete list of VCS754 configuration file modules and their associated parameters, see *"Configuration File Parameter Guide" on page 84*.

Using the WebUI, you can also import a configuration file and apply the configuration file settings to the VCS754. For more information, see *"Import Configuration" on page 70*.

This chapter covers:

The Provisioning Process

The automatic provisioning process is as follows:

1. Check for new or updated configuration files. For file-checking options, see *"Resynchronization: configuration file checking" on page 78*. The VCS754 maintains a list of the last loaded provisioning files. The VCS754 compares its current configuration against the files it finds on the provisioning server. **Checking for update…** appears on the VCS754 screen.

    If provisioning has been triggered by the resync timer expiring or by remote check-sync, the VCS754 checks for updated files after one minute of inactivity.

2. Download the configuration files.

    If any file on the provisioning server has changed, the VCS754 treats it as a new file and downloads it.

    If the provisioning URL specifies a path only with no filename, then by default the VCS754 looks for and retrieves the following two files:

    -   General file: **<model>.cfg**.

    -   MAC-specific file: **<model>_<MAC Address>.cfg**.

    The <model> variable is the VTech product model: VCS754, for example.

    If the provisioning URL specifies both a path and filename, then the VCS754 retrieves only the configuration file specified.

3. The VCS754 restarts after one minute of inactivity.

During provisioning, the VCS754 reads the configuration file and validates each module and setting. The VCS754 considers a setting valid if it is:

-   a valid data type

-   formatted as a valid setting

-   within a valid data range

-   part of a module that passes an integrity check. That is, the module's settings are consistent and logical. For example, in the "network" module, if DHCP is disabled, but no static IP address is specified, the module will fail the integrity check and none of the settings will apply.

Invalid modules or invalid settings are skipped and logged as ERROR messages in the system log, but will not interrupt the provisioning process. The system log will include the module parameters that have not been applied. A recognized module with unrecognized settings will cause all other settings in that module to be skipped.

A successful configuration or firmware update is reported as an INFO message in the system log.

See *"Configuration File Parameter Guide" on page 84* for the options and value ranges available for each configuration file setting.

Resynchronization: configuration file checking

You can select a number of options that determine when the VCS754 checks for new configuration files. This process of checking for configuration files is called Resynchronization. Resynchronization options are available on the WebUI **Provisioning** page, but you can also include them in a configuration file.

The resynchronization options are:

- Mode—sets the VCS754 to check for a configuration file only, a firmware update file only, or both types of file.

- Never—configuration file checking is disabled

- Bootup—the VCS754 checks for new configuration files when it boots up. Any updates are applied during the boot-up process.

- Remote check-sync—enables you to start a resynchronization remotely using your hosted server's web portal. The Remote check-sync settings are available only in the configuration file, not the WebUI.

- Repeatedly, at a defined interval from 60 to 65535 minutes (45 days).

VCS754 restart

If the VCS754 needs to restart after an auto-update, the restart happens only after the device has been idle for one minute.

To prevent users from delaying the update process (auto-updates cannot begin until the VCS754 has been idle for one minute), or to avoid device restarts that might interfere with incoming calls:

- set the resynchronization interval to a suitable period

- upload any new configuration file(s) to your provisioning server after work hours so that the VCS754 will download the file(s) when there is no call activity.

When you update the VCS754 by importing a configuration file using the WebUI, the device restarts immediately after applying the new settings, regardless of whether the VCS754 is idle.

Configuration File Types

The VCS754 is able to retrieve and download two types of configuration file. Depending on your requirements, you may want to make both types of configuration file available on your provisioning server.

The two configuration file types are a general configuration file and a MAC-specific configuration file. The types differ in name only. The formatting of the files' content is identical.

The general configuration file contains settings that are required by every VCS754 in the system.

The MAC-specific configuration file is a file that only a single VCS754 can retrieve. The MAC-specific configuration file name contains a VCS754 MAC address and can only be retrieved by the device with a matching MAC address.

The filename formats for both files are:

- General file: **<model>.cfg**

- MAC-specific file: **<model>_<MAC Address>.cfg**

The <model> variable is the VTech product model; for example, **VSP725**. For more information about the MAC-specific configuration file, see *"Guidelines for the MAC-Specific configuration file" on page 81*.

If the provisioning URL specifies a path only with no filename, then by default the VCS754 will fetch both files.

However, if the provisioning URL specifies both a path and filename, then the VCS754 will only fetch the single configuration file specified.

Both the general and MAC-specific files can contain any of the available configuration settings. A setting can appear in the general configuration file or the MAC-specific configuration file, or both files, or neither file. If a setting appears in both files, the setting that is read last is the one that applies.

When the VCS754 fetches both a general and a MAC-specific configuration file, the general file is processed first. You can configure a setting for most of your VCS754 conference phones in the general file, and then overwrite that setting for just a few VCS754 conference phones using the MAC-specific file.

Data Files

The configuration file can also include links to data files for product customization. Allowed data types include the following:

- Directory (contacts, blacklist) in .xml format

- Certificates (server, provisioning, LDAP, Broadsoft) in pem format

Links to data files are in the configuration file's "file" module. This is where you enter any URLs to the data files that the VCS754 conference phone may require.

None of the data files are exported when you export a configuration file from the VCS754. However, you can export a Directory or Blacklist .xml file using the WebUI. After modifying the .xml file, you can use the configuration file "file" module to have the VCS754 import the new file. For a complete list of data file parameters, see *""file" Module: Imported File Settings" on page 120*.

Configuration File Guide

All configuration settings are initially stored in a configuration template file. Copy, rename, and edit the template file to create a general configuration file and the MAC-specific configuration files you will need. You can store the general configuration file and the MAC-specific files on your provisioning server.

Do not modify the configuration file header line that includes the model and firmware version.

To save yourself time and effort, consider which settings will be common to all (or the majority of) VCS754 conference phones. Such settings might include call settings, language, and NAT settings. You can then edit those settings in the configuration template and save it as the general configuration file. The remaining settings will make up the MAC-specific configuration file, which you will have to copy and edit for each VCS754.

Guidelines for the MAC-Specific configuration file

The VCS754 downloads the MAC-specific configuration file after the general configuration file. You must create a MAC-specific configuration file for each VCS754 in your system. The file name must contain the VCS754 MAC address, which is printed on a label on the bottomof the device, or available on the **MENU > Status > Product Info** screen. For example, a VTech VCS754 conference phone with the MAC address of 00:11:A0:10:6F:2D would download the **VCS754_0011A0106F2D.cfg** file.

> **i NOTE** When renaming a MAC-specific configuration file, ensure the filename is all upper case.

The MAC-specific configuration file contains settings intended exclusively for that VCS754 conference phone. Such settings will include SIP account settings such as display name, user ID, and authentication ID.

Securing configuration files with AES encryption

You can encrypt your configuration files to prevent unauthorized users modifying the configuration files. The VCS754 firmware decrypts files using the AES 256 algorithm. After encrypting a file and placing it on your provisioning server, you can enable the VCS754 to decrypt the file after fetching it from the server.

The procedures in this section use OpenSSL for Windows for file encryption, as shown in Figure 2.

To decrypt a configuration file, you will need a 16-character AES key that you specified when you encrypted the file. The key (or passphrase) is limited to 16 characters in length and supports special characters **~ ^ ` % ! & - _ + = | . @ * : ; , ? ( ) [ ] { } < > / \ #** as well as spaces.

> **NOTE** The encryption of configuration files is supported only for the auto provisioning process. Encrypt files only if you intend to store them on a provisioning server. Do not encrypt files that you intend to manually import to the VCS754. You cannot enable decryption for manually imported configuration files.

To encrypt a configuration file:

1. (Optional) Place your configuration file in the same folder as the openssl executable file. If the configuration file is not in the same folder as the openssl executable file, you can enter a relative pathname for the [infile] in the next step.

2. Double-click the **openssl.exe** file.

3. On the openssl command line, type:

   ```
   enc -aes-256-cbc -pass pass:[passphrase123456] -in [infile] -out [outfile]
   -nosalt -p
   ```

Elements in brackets are examples—do not enter the brackets. Enter a 16-character passphrase and the unencrypted configuration file filename (the "infile") and a name for the encrypted file ("outfile") that will result.

Figure 2. OpenSSL command line

To enable configuration file decryption:

1. On the WebUI, click **Servicing** > **Provisioning**.

2. On the Provisioning page under **Resynchronization**, select **Use Encryption for configuration file**.

3. Enter the 16-character passphrase that you created when you encrypted the configuration file.

4. Click   Save   .

> **i NOTE** You must ensure that configuration files are encrypted when enabling AES Encryption. Decrypting an unencrypted file will result in a garbage file that is not processed. This will also be logged as an error in the system log.

C H A P T E R 5

CONFIGURATION FILE PARAMETER GUIDE

This chapter lists the available options for all the settings within the VCS754 configuration file. Most settings in the configuration file have an equivalent in the WebUI (see the settings tables in *"Using the WebUI" on page 25*). However, the options you must enter when editing the configuration file have a different syntax and format.

The settings are divided into modules. Most modules correspond to a page on the VCS754 WebUI. You may wish to reorganize the modules within the configuration file itself. The configuration file settings can be listed in any order, and the configuration file will still be valid.

The modules included in the configuration file are:

- *""sip_account" Module: SIP Account Settings" on page 85*

- *""network" Module: Network Settings" on page 95*

- *""provisioning" Module: Provisioning Settings" on page 99*

- *""time_date" Module: Time and Date Settings" on page 102*

- *""log" Module: Log Settings" on page 106*

- *""remoteDir" Module: Remote Directory Settings" on page 107*

- *""web" Module: Web Settings" on page 112*

- *""user_pref" Module: User Preference Settings" on page 113*

- *""call_settings" Module: Call Settings" on page 116*

- *""speed_dial" Module: Speed Dial Settings" on page 118*

- *""ringersetting" Module: Distinctive Ringer Settings" on page 119*

- *""file" Module: Imported File Settings" on page 120*

- *""tone" Module: Tone Definition Settings" on page 122*

- *""profile" Module: Password Settings" on page 125*

- *""page_zone" Module: Paging Zone Settings" on page 126*

- *""softkey" Module: Custom Soft Key Settings" on page 128*.

"sip_account" Module: SIP Account Settings

The SIP Account settings enable you to set up individual accounts for each user. You can add up to three accounts for each VCS754. Each account requires you to configure the same group of SIP account settings. The SIP account settings for each account are identified by the account number, from 1 to 3 for the VCS754, for example.

For example, for account 1 you would set:

`sip_account.1.sip_account_enable = 1`

`sip_account.1.display_name = 1001`

`sip_account.1.user_id = 2325551001`

and so on.

For account 2, you would set:

`sip_account.2.sip_account_enable = 1`

`sip_account.2.display_name = 1002`

`sip_account.2.user_id = 2325551002`

and so on, for each account.

The SIP account settings follow the format: sip_account.x.[element], where x is an account number ranging from 1 to 3 for the VCS754.

All these settings are exported when you manually export the configuration from the VCS754.

General configuration file settings

Setting:	`sip_account.x.dial_plan`		
Description:	Sets the dial plan for account x. See *"Dial Plan" on page 32*.		
Values:	Text string	**Default:**	x+P

Setting:	`sip_account.x.inter_digit_timeout`
Description:	Sets the inter-digit timeout (in seconds) for account x. The inter-digit timeout sets how long the VCS754 waits after the last digit is entered before dialing the number.
Values:	1–10 **Default:** 3

Setting:	`sip_account.x.maximum_call_number`
Description:	Sets the maximum number of concurrent active calls allowed for that account.
Values:	1–6 **Default:** 6

Setting:	`sip_account.x.dtmf_transport_method`
Description:	Sets the transport method for DTMF signalling for account x.
Values:	auto, rfc2833, inband, info **Default:** auto

Setting:	`sip_account.x.unregister_after_reboot_enable`
Description:	Enables or disables the VCS754 to unregister account x after rebooting.
Values:	0 (disabled), 1 (enabled) **Default:** 0

Setting:	`sip_account.x.primary_sip_server_address`
Description:	Sets the SIP server IP address for account x.
Values:	Text string **Default:** Blank

Setting:	`sip_account.x.primary_sip_server_port`
Description:	Sets the SIP server port for account x.
Values:	1–65535 **Default:** 5060

Setting:	`sip_account.x.primary_registration_server_address`
Description:	Sets the registration server IP address for account x.
Values:	Text string **Default:** Blank

Setting:	`sip_account.x.primary_registration_server_port`		
Description:	Sets the registration server port for account x.		
Values:	1–65535	Default:	5060

Setting:	`sip_account.x.primary_registration_expires`		
Description:	Sets the expiration time (in seconds) of the current registration for account x.		
Values:	30–7200	Default:	3600

Setting:	`sip_account.x.registration_retry_time`		
Description:	Sets the retry frequency of the current registration for account x.		
Values:	1–1800	Default:	10

Setting:	`sip_account.x.primary_outbound_proxy_server_address`		
Description:	Sets the outbound proxy server IP address for account x.		
Values:	Text string	Default:	Blank

Setting:	`sip_account.x.primary_outbound_proxy_server_port`		
Description:	Sets the outbound proxy server port for account x.		
Values:	1–65535	Default:	5060

Setting:	`sip_account.x.backup_outbound_proxy_server_address`		
Description:	Sets the backup outbound proxy server IP address for account x.		
Values:	Text string	Default:	Blank

Setting:	`sip_account.x.backup_outbound_proxy_server_port`		
Description:	Sets the backup outbound proxy server port for account x.		
Values:	1–65535	Default:	5060

Setting:	`sip_account.x.codec_priority.1`
Description:	Sets the highest-priority codec for account x.

Values:	g711u, g711a, g729a/b, g726, g722	**Default:**	g711u

Setting:	`sip_account.x.codec_priority.2`
Description:	Sets the second highest-priority codec for account x.

Values:	none, g711u, g711a, g729a/b, g726, g722	**Default:**	g711a

Setting:	`sip_account.x.codec_priority.3`
Description:	Sets the third highest-priority codec for account x.

Values:	none, g711u, g711a, g729a/b, g726, g722	**Default:**	g729a/b

Setting:	`sip_account.x.codec_priority.4`
Description:	Sets the fourth highest-priority codec for account x.

Values:	none, g711u, g711a, g729a/b, g726, g722	**Default:**	g726

Setting:	`sip_account.x.codec_priority.5`
Description:	Sets the fifth highest-priority codec for account x.

Values:	none, g711u, g711a, g729a/b, g726, g722	**Default:**	g722

Setting:	`sip_account.x.voice_encryption_enable`
Description:	Enables or disables SRTP voice encryption for account x.

Values:	0 (disabled), 1 (enabled)	**Default:**	0

Setting:	`sip_account.x.g729_annexb_enable`		
Description:	Enables G.729 Annex B, with voice activity detection (VAD) and bandwidth-conserving silence suppression. This setting applies only when G.729a/b is selected in a `sip_account.x.codec_priority` parameter.		
Values:	0 (disabled), 1 (enabled)	Default:	0

Setting:	`sip_account.x.dscp`		
Description:	Sets the Voice Quality of Service Layer 3 - DSCP for account x.		
Values:	0–63	Default:	46

Setting:	`sip_account.x.sip_dscp`		
Description:	Sets the Signalling Quality of Service Layer 3 - DSCP for account x.		
Values:	0–63	Default:	26

Setting:	`sip_account.x.normal_jitter`		
Description:	Sets the oRTP jitter buffer in milliseconds.		
Values:	0–255	Default:	80

Setting:	`sip_account.x.local_sip_port`		
Description:	Sets the Local SIP port for account x.		
Values:	1–65535	Default:	Account 1: 5060 Account 2: 5070 Account 3: 5080

Setting:	`sip_account.x.transport_mode`		
Description:	Sets the Signalling Transport Mode for account x.		
Values:	udp, tcp, tls	Default:	udp

Setting:	`sip_account.x.access_code_retrieve_voicemail`		
Description:	Sets the voicemail retrieval feature access code for account x.		
Values:	Text string	Default:	Blank

Setting:	`sip_account.x.access_code_dnd_on`
Description:	Sets the do not disturb (DND) ON feature access code for account x.
Values:	Text string **Default:** Blank

Setting:	`sip_account.x.access_code_dnd_off`
Description:	Sets the do not disturb (DND) OFF feature access code for account x.
Values:	Text string **Default:** Blank

Setting:	`sip_account.x.access_code_cfa_on`
Description:	Sets the Call Forward All ON feature access code for account x.
Values:	Text string **Default:** Blank

Setting:	`sip_account.x.access_code_cfa_off`
Description:	Sets the Call Forward All OFF feature access code for account x.
Values:	Text string **Default:** Blank

Setting:	`sip_account.x.access_code_cfna_on`
Description:	Sets the Call Forward No Answer ON feature access code for account x.
Values:	Text string **Default:** Blank

Setting:	`sip_account.x.access_code_cfna_off`
Description:	Sets the Call Forward No Answer OFF feature access code for account x.
Values:	Text string **Default:** Blank

Setting:	`sip_account.x.access_code_cfb_on`
Description:	Sets the Call Forward Busy ON feature access code for account x.
Values:	Text string **Default:** Blank

Setting:	`sip_account.x.access_code_cfb_off`
Description:	Sets the Call Forward Busy OFF feature access code for account x.
Values:	Text string **Default:** Blank

Setting:	`sip_account.x.access_code_anonymous_call_block_on`
Description:	Sets the Anonymous Call Block ON feature access code for account x.
Values:	Text string **Default:** Blank

Setting:	`sip_account.x.access_code_anonymous_call_block_off`
Description:	Sets the Anonymous Call Block OFF feature access code for account x.
Values:	Text string **Default:** Blank

Setting:	`sip_account.x.access_code_outgoing_call_anonymous_on`
Description:	Sets the Anonymous Outgoing Call ON feature access code for account x.
Values:	Text string **Default:** Blank

Setting:	`sip_account.x.access_code_outgoing_call_anonymous_off`
Description:	Sets the Anonymous Outgoing Call OFF feature access code for account x.
Values:	Text string **Default:** Blank

Setting:	`sip_account.x.mwi_enable`
Description:	Enables or disables message waiting indicator subscription for account x. Enable if SUBSCRIBE and NOTIFY methods are used for MWI.
Values:	0 (disabled), 1 (enabled) **Default:** 0

Setting:	`sip_account.x.mwi_subscription_expires`
Description:	Sets the MWI subscription expiry time (in seconds) for account x.
Values:	0–65535 **Default:** 3600

Setting:	`sip_account.x.mwi_ignore_unsolicited`
Description:	Enables or disables ignoring of unsolicited MWI notifications—notifications in addition to, or instead of, SUBSCRIBE and NOTIFY methods—for account x. Disable if MWI service is configured on the voicemail server and does not involve a subscription to a voicemail server.
Values:	0 (disabled), 1 (enabled) **Default:** 1

Setting:	`sip_account.x.nat_traversal_stun_enable`		
Description:	Enables or disables STUN (Simple Traversal of UDP through NATs) for account x. STUN enables clients, each behind a firewall, to establish calls via a service provider hosted outside of either local network.		
Values:	0 (disabled), 1 (enabled)	Default:	0

Setting:	`sip_account.x.nat_traversal_stun_server_address`		
Description:	Sets the STUN server IP address.		
Values:	Text string	Default:	Blank

Setting:	`sip_account.x.nat_traversal_stun_server_port`		
Description:	Sets the STUN server port.		
Values:	1–65535	Default:	3478

Setting:	`sip_account.x.nat_traversal_udp_keep_alive_enable`		
Description:	Enables or disables UDP keep-alives. Keep-alive packets are used to maintain connections established through NAT.		
Values:	0 (disabled), 1 (enabled)	Default:	1

Setting:	`sip_account.x.nat_traversal_udp_keep_alive_interval`		
Description:	Sets the interval (in seconds) for sending UDP keep-alives.		
Values:	0–65535	Default:	30

Setting:	`sip_account.x.music_on_hold_enable`		
Description:	Enables or disables a hold-reminder tone that a far-end caller hears when put on hold during a call on account x.		
Values:	0 (disabled), 1 (enabled)	Default:	1

Setting:	`sip_account.x.network_conference_enable`		
Description:	Enables or disables network conferencing for account x.		
Values:	0 (disabled), 1 (enabled)	Default:	0

Setting:	`sip_account.x.network_bridge_uri`
Description:	Sets the URI for the network conferencing bridge on account x.
Values:	Text string (SIP URI) **Default:** Blank

Setting:	`sip_account.x.sip_session_timer_enable`
Description:	Enables or disables the SIP session timer.
Values:	0 (disabled), 1 (enabled) **Default:** 0

Setting:	`sip_account.x.sip_session_timer_min`
Description:	Sets the session timer minimum value (in seconds) for account x.
Values:	90–65535 **Default:** 90

Setting:	`sip_account.x.sip_session_timer_max`
Description:	Sets the session timer maximum value (in seconds) for account x.
Values:	0–65535 **Default:** 1800

Setting:	`sip_account.x.check_trusted_certificate`
Description:	Enables or disables accepting only a trusted TLS certificate for account x.
Values:	0 (disabled), 1 (enabled) **Default:** 0

Setting:	`sip_account.use_first_trusted_certificate_for_all`
Description:	Enables or disables accepting the first TLS certificate for all accounts.
Values:	0 (disabled), 1 (enabled) **Default:** 0

MAC-specific configuration file settings

Setting:	`sip_account.x.sip_account_enable`
Description:	Enables account x to be used by the device.
Values:	0 (disabled), 1 (enabled) **Default:** 0

Setting:	`sip_account.x.display_name`
Description:	Sets the account name displayed on the device LCD. This could be the account user's name or another descriptor.
Values: Text string	**Default:** Blank

Setting:	`sip_account.x.user_id`
Description:	Sets the account ID for account x. Depending on your service provider's specifications, this could be an extension number. NOTE: Do not enter the host name (e.g. "@sipservice.com"). The configuration file automatically adds the default host name.
Values: Text string	**Default:** Blank

Setting:	`sip_account.x.authentication_name`
Description:	Sets the authentication name for account x. Depending on your service provider's specifications, this could be identical to the user ID.
Values: Text string	**Default:** Blank

Setting:	`sip_account.x.authentication_password`
Description:	Sets the authentication password for account x.
Values: Text string	**Default:** Blank

Setting:	`sip_account.x.feature_sync_enable`
Description:	Enables or disables feature synchronization for account x. When enabled, features configured on the service provider's web portal will automatically be updated on the device's WebUI.
Values: 0 (disabled), 1 (enabled)	**Default:** 0

Setting:	`sip_account.x.mwi_uri`
Description:	Sets the MWI URI that will be used for MWI subscription. If this setting is left blank, the VCS754 uses the account x user ID for MWI subscription.
Values: SIP URI text string	**Default:** Blank

"network" Module: Network Settings

The network settings follow the format: network.[element].

General configuration file settings

Setting:	`network.rtp.port_start`
Description:	Sets the Local RTP port range start.

Values:	1–65535	**Default:**	18000

Setting:	`network.rtp.port_end`
Description:	Sets the Local RTP port range end.

Values:	1–65535	**Default:**	19000

Setting:	`network.vlan.wan.enable`
Description:	Enables or disables the WAN VLAN.

Values:	0 (disabled), 1 (enabled)	**Default:**	0

Setting:	`network.vlan.wan.id`
Description:	Sets the WAN VLAN ID.

Values:	0–4095	**Default:**	0

Setting:	`network.vlan.wan.priority`
Description:	Sets the WAN port priority.

Values:	0–7	**Default:**	0

Setting:	`network.lldp_med.enable`
Description:	Enables or disables LLDP-MED.

Values:	0 (disabled), 1 (enabled)	**Default:**	0

Setting:	`network.lldp_med.interval`
Description:	Sets the LLDP-MED packet interval (in seconds).

Values:	1–30	**Default:**	30

Setting:	`network.eapol.enable`		
Description:	Enables or disables 802.1x EAPOL.		
Values:	0 (disabled), 1 (enabled)	**Default:**	0

Setting:	`network.eapol.identity`		
Description:	Sets the 802.1x EAPOL identity.		
Values:	Text string	**Default:**	Blank

Setting:	`network.eapol.password`		
Description:	Sets the 802.1x EAPOL MD5 password.		
Values:	Text string	**Default:**	Blank

Setting:	`network.vendor_class_id`		
Description:	Sets the vendor ID for DHCP option 60.		
Values:	Text string	**Default:**	Vtech Vesa VCS754

Setting:	`network.user_class`		
Description:	Sets the user class for DHCP option 77.		
Values:	Text string	**Default:**	Vtech Vesa VCS754

Setting:	`network.ip_dns_cache_clear_timeout`		
Description:	Sets the interval (in minutes) between removing all caching and performing a new DNS lookup. Set to 0 to remove all caching and perform a DNS lookup for every outgoing request and response (TTL=0 emulation).		
Values:	0–1440	**Default:**	60

MAC-specific configuration file settings

Setting:	`network.nat.masquerading_enable`		
Description:	Enables or disables IP masquerading.		
Values:	0 (disabled), 1 (enabled)	**Default:**	0

Setting:	`network.nat.public_ip_addr`
Description:	Sets the public IP address.
Values:	Text string (IPv4) **Default:** 0

Setting:	`network.nat.public_sip_port`
Description:	Sets the public SIP port.
Values:	1–65535 **Default:** 5060

Setting:	`network.nat.public_rtp_port_start`
Description:	Sets the public RTP port range start.
Values:	1–65535 **Default:** 18000

Setting:	`network.nat.public_rtp_port_end`
Description:	Sets the public RTP port range end.
Values:	1–65535 **Default:** 19000

Setting:	`network.ip.dhcp_enable`
Description:	Indicates whether DHCP is enabled.
Values:	0 (disabled), 1 (enabled) **Default:** 1

Setting:	`network.ip.static_ip_addr`
Description:	Sets a static IP address for the network.
Values:	Text string (IPv4) **Default:** Blank

Setting:	`network.ip.subnet_mask`
Description:	Sets the subnet mask for the network.
Values:	Text string (IPv4) **Default:** Blank

Setting:	`network.ip.gateway_addr`
Description:	Sets the Gateway IP address.
Values:	Text string (IPv4) **Default:** Blank

Setting:	`network.ip.dns1`		
Description:	Sets the primary DNS server IP address.		
Values:	Text string (IPv4)	**Default:**	Blank

Setting:	`network.ip.dns2`		
Description:	Sets the secondary DNS server IP address.		
Values:	Text string (IPv4)	**Default:**	Blank

"provisioning" Module: Provisioning Settings

The provisioning settings follow the format: provisioning.[element].

All these settings are exported when you manually export the configuration from the VCS754.

All the provisioning settings are included in the general configuration file.

Setting:	`provisioning.firmware_url`
Description:	Sets the URL for the server hosting the firmware file.
Values:	Text string **Default:** Blank

Setting:	`provisioning.fw_server_username`
Description:	Sets the authentication name for the server hosting the firmware file.
Values:	Text string **Default:** Blank

Setting:	`provisioning.fw_server_password`
Description:	Sets the authentication password for the server hosting the firmware file.
Values:	Text string **Default:** Blank

Setting:	`provisioning.server_address`
Description:	Sets the provisioning server IP address.
Values:	Text string **Default:** Blank

Setting:	`provisioning.server_username`
Description:	Sets the authentication name for the provisioning server.
Values:	Text string **Default:** Blank

Setting:	`provisioning.server_password`
Description:	Sets the authentication password for the provisioning server.
Values:	Text string **Default:** Blank

Setting:	`provisioning.dhcp_option_enable`
Description:	Enables or disables using DHCP options for locating the configuration and firmware files.
Values:	0 (disabled), 1 (enabled) **Default:** 1

Setting:	`provisioning.dhcp_option_priority_1`
Description:	Sets the first priority DHCP option for the provisioning/firmware file check.
Values:	66, 159, 160 **Default:** 66

Setting:	`provisioning.dhcp_option_priority_2`
Description:	Sets the second priority DHCP option for the provisioning/firmware file check.
Values:	66, 159, 160 **Default:** 159

Setting:	`provisioning.dhcp_option_priority_3`
Description:	Sets the third priority DHCP option for the provisioning/firmware file check.
Values:	66, 159, 160 **Default:** 160

Setting:	`provisioning.resync_mode`
Description:	Sets the mode of the device's provisioning/firmware file check. This determines which files the device retrieves when the resync process begins.
Values:	config_only, firmware_only, config_and_firmware **Default:** config_and_firmware

Setting:	`provisioning.bootup_check_enable`
Description:	Enables or disables bootup check for configuration and firmware files.
Values:	0 (disabled), 1 (enabled) **Default:** 1

Setting:	`provisioning.resync_time`
Description:	Sets the interval (in minutes) between checks for new firmware and/or configuration files.
Values:	0–65535 **Default:** 0 (OFF)

Setting:	`provisioning.remote_check_sync_enable`
Description:	Enables or disables remotely triggering the device to check for new firmware and/or configuration files. The file checking is triggered remotely via a SIP Notify message from the server containing the **check-sync** event.
Values:	0 (disabled), 1 (enabled) **Default:** 1

Setting:	`provisioning.crypto_enable`
Description:	Enables or disables encryption check for the configuration file(s). Enable if you have encrypted the configuration file(s) using AES encryption.
Values:	0 (disabled), 1 (enabled) **Default:** 0

Setting:	`provisioning.crypto_passphrase`
Description:	Sets the AES encryption passphrase for decrypting the configuration file(s). Enter the key that was generated when you encrypted the file.
Values:	Text string **Default:** Blank

Setting:	`provisioning.check_trusted_certificate`
Description:	Enables or disables accepting only a trusted TLS certificate for access to the provisioning server.
Values:	0 (disabled), 1 (enabled) **Default:** 0

Setting:	`provisioning.pnp_enable`
Description:	Enables or disables the VCS754 checking for the provisioning URL using the Plug-and-Play Subscribe and Notify protocol.
Values:	0 (disabled), 1 (enabled) **Default:** 1

Setting:	`provisioning.pnp_response_timeout`
Description:	Sets how long the VCS754 repeats the SUBSCRIBE request if there is no reply from the PnP server.
Values:	1–60 **Default:** 10

"time_date" Module: Time and Date Settings

The time and date settings follow the format: time_date.[element].

All these settings are exported when you manually export the configuration from the VCS754.

All the time and date settings are included in the general configuration file.

Setting: `time_date.ntp_server`

Description: Enables or disables NTP server to set time and date.

Values: 0 (disabled), 1 (enabled)   **Default:** 1

Setting: `time_date.ntp_server_addr`

Description: Sets the URL for the NTP server.

Values: Text string   **Default:** us.pool.ntp.org

Setting: `time_date.ntp_dhcp_option`

Description: Enables or disables DHCP option 42 to find the NTP server.

Values: 0 (disabled), 1 (enabled)   **Default:** 0

Setting: `time_date.selected_timezone`

Description: Sets the local timezone.

Values:	Pacific/Pago_Pago, Pacific/Honolulu, America/Adak, America/Anchorage, America/Vancouver, America/Tijuana, America/Los_Angeles, America/Edmonton, America/Chihuahua, America/Denver, America/Phoenix, America/Winnipeg, Pacific/Easter, America/Mexico_City, America/Chicago, America/Nassau, America/Montreal, America/Grand_Turk, America/Havana, America/New_York, America/Caracas, America/Halifax, America/Santiago, America/Asuncion, Atlantic/Bermuda, Atlantic/Stanley, America/Port_of_Spain, America/St_Johns, America/Godthab, America/Argentina/Buenos_Aires, America/Fortaleza, America/Sao_Paulo, America/Noronha, Atlantic/Azores, GMT, America/Danmarkshavn, Atlantic/Faroe, Europe/Dublin, Europe/Lisbon, Atlantic/Canary, Europe/London, Africa/Casablanca, Europe/Tirane, Europe/Vienna, Europe/Brussels, Europe/Zagreb, Europe/Prague, Europe/Copenhagen, Europe/Paris, Europe/Berlin, Europe/Budapest, Europe/Rome, Europe/Luxembourg, Europe/Skopje, Europe/Amsterdam, Africa/Windhoek, Europe/Tallinn, Europe/Helsinki, Asia/Gaza, Europe/Athens, Asia/Jerusalem, Asia/Amman, Europe/Riga, Asia/Beirut, Europe/Chisinau, Europe/Kaliningrad, Europe/Bucharest, Asia/Damascus, Europe/Istanbul, Europe/Kiev, Africa/Djibouti, Asia/Baghdad, Europe/Moscow, Asia/Tehran, Asia/Yerevan, Asia/Baku, Asia/Tbilisi, Asia/Aqtau, Europe/Samara, Asia/Aqtobe, Asia/Bishkek, Asia/Karachi, Asia/Yekaterinburg, Asia/Kolkata, Asia/Almaty, Asia/Novosibirsk, Asia/Krasnoyarsk, Asia/Bangkok, Asia/Shanghai, Asia/Singapore, Australia/Perth, Asia/Seoul, Asia/Tokyo, Australia/Adelaide, Australia/Darwin, Australia/Sydney, Australia/Brisbane, Australia/Hobart, Asia/Vladivostok, Australia/Lord_Howe, Pacific/Noumea, Pacific/Auckland, Pacific/Chatham, Pacific/Tongatapu	**Default:** America/New_York

Setting:	`time_date.daylight_saving_auto_adjust`		
Description:	Sets the device to automatically adjust clock for daylight savings.		
Values:	0 (disabled), 1 (enabled)	**Default:**	1

Setting:	`time_date.daylight_saving_user_defined`		
Description:	Enables or disables manual daylight savings configuration.		
Values:	0 (disabled), 1 (enabled)	**Default:**	0

Setting:	`time_date.daylight_saving_start_month`		
Description:	Sets the month that daylight savings time starts.		
Values:	January–December	**Default:**	March

Setting:	`time_date.daylight_saving_start_week`		
Description:	Sets the week that daylight savings time starts.		
Values:	1–5	**Default:**	2

Setting:	`time_date.daylight_saving_start_day`		
Description:	Sets the day that daylight savings time starts.		
Values:	Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, Saturday	**Default:**	Sunday

Setting:	`time_date.daylight_saving_start_hour`		
Description:	Sets the hour that daylight savings time starts.		
Values:	00:00–23:00	**Default:**	02:00

Setting:	`time_date.daylight_saving_end_month`		
Description:	Sets the month that daylight savings time ends.		
Values:	January–December	**Default:**	November

Setting:	`time_date.daylight_saving_end_week`
Description:	Sets the week that daylight savings time ends.

Values:	1–5	**Default:**	1

Setting:	`time_date.daylight_saving_end_day`
Description:	Sets the day that daylight savings time ends.

Values:	Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, Saturday	**Default:**	Sunday

Setting:	`time_date.daylight_saving_end_hour`
Description:	Sets the hour that daylight savings time ends.

Values:	00:00–23:00	**Default:**	02:00

Setting:	`time_date.daylight_saving_amount`
Description:	Sets the daylight savings time offset in minutes.

Values:	0–255	**Default:**	60

Setting:	`time_date.timezone_dhcp_option`
Description:	Enables or disables DHCP option 2/100/101 for determining time zone information.

Values:	0 (disabled), 1 (enabled)	**Default:**	0

Setting:	`time_date.ntp_server_update_interval`
Description:	Sets the delay between NTP server updates, in seconds.

Values:	0–4294967295	**Default:**	1000

"log" Module: Log Settings

The log settings control system logging activities. System logging may be required for troubleshooting purposes. The following logging modes are supported:

- Serial/Console—system log output to an external console using a serial/RS-232 cable

- Syslog server—output to a log file on a separate server

- Volatile file

The log settings follow the format: log.[element].

All the log settings are included in the general configuration file.

Setting:	`log.syslog_enable`
Description:	Enables or disables log output to syslog server.
Values:	0 (disabled), 1 (enabled) **Default:** 0

Setting:	`log.syslog_server_address`
Description:	Sets the syslog server IP address.
Values:	Text string (IPv4) **Default:** Blank

Setting:	`log.syslog_server_port`
Description:	Sets the syslog server port.
Values:	1–65535 **Default:** 514

Setting:	`log.syslog_level`
Description:	Sets the log level. The higher the level, the larger the debug output. 5—all 4—debug 3—info 2—warning 1—error 0—critical
Values:	0–5 **Default:** 2

"remoteDir" Module: Remote Directory Settings

The remote directory settings follow the format: remoteDir.[element].

All these settings are exported when you manually export the configuration from the VCS754.

All the remote directory settings are included in the general configuration file.

Setting:	`remoteDir.ldap_enable`		
Description:	Enables or disables the VCS754 conference phone's access to the LDAP directory.		
Values:	0 (disabled), 1 (enabled)	Default:	0

Setting:	`remoteDir.ldap_directory_name`		
Description:	Sets the LDAP directory name.		
Values:	Text string	Default:	Blank

Setting:	`remoteDir.ldap_server_address`		
Description:	Sets the LDAP server IP address.		
Values:	Text string	Default:	Blank

Setting:	`remoteDir.ldap_port`		
Description:	Sets the LDAP server port.		
Values:	1–65535	Default:	389

Setting:	`remoteDir.ldap_protocol_version`		
Description:	Sets the LDAP protocol version.		
Values:	version_2, version_3	Default:	version_3

Setting:	`remoteDir.ldap_authentication_type`		
Description:	Sets the LDAP authentication type.		
Values:	simple, ssl	Default:	simple

Setting:	`remoteDir.ldap_user_name`		
Description:	Sets the LDAP authentication user name.		
Values:	Text string	Default:	Blank

Setting:	`remoteDir.ldap_password`		
Description:	Sets the LDAP authentication password.		
Values:	Text string	Default:	Blank

Setting:	`remoteDir.ldap_base`		
Description:	Sets the LDAP search base. This sets where the search begins in the directory tree structure. Enter one or more attribute definitions, separated by commas (no spaces). Your directory may include attributes like "cn" (common name) or "ou" (organizational unit) or "dc" (domain component). For example, ou=accounting,dc=vtech,dc=com		
Values:	Text string	Default:	Blank

Setting:	`remoteDir.ldap_max_hits`		
Description:	Sets the maximum number of entries returned for an LDAP search. Limiting the number of hits can conserve network bandwidth.		
Values:	0–32000	Default:	200

Setting:	`remoteDir.ldap_search_delay`		
Description:	Sets the LDAP maximum search delay in seconds.		
Values:	0–500	Default:	0

Setting:	`remoteDir.ldap_firstname_filter`		
Description:	Sets the LDAP first name attribute filter.		
Values:	Text string	Default:	Firstname

Setting:	`remoteDir.ldap_lastname_filter`		
Description:	Sets the LDAP last name attribute filter.		
Values:	Text string	Default:	Lastname

Setting:	`remoteDir.ldap_number_filter`
Description:	Sets the LDAP number filter.
Values:	Text string

Default: Blank

Setting:	`remoteDir.ldap_firstname_attribute`
Description:	Sets the name attributes. Enter the name attributes that you want the VCS754 to display for each entry returned after an LDAP search. Separate each attribute with a space. For example, givenName sn will display the first name and surname for each entry.
Values:	Text string

Default: Blank

Setting:	`remoteDir.ldap_lastname_attribute`
Description:	Sets the last name attributes.
Values:	Text string

Default: Blank

Setting:	`remoteDir.ldap_work_number_attributes`
Description:	Sets the number attributes. Enter the number attributes that you want the VCS754 to display for each entry returned after an LDAP search. Separate each attribute with a space. For example, telephoneNumber mobile will display the work phone number and mobile phone number for each entry.
Values:	Text string

Default: Blank

Setting:	`remoteDir.ldap_mobile_number_attributes`
Description:	Sets the mobile number attributes.
Values:	Text string

Default: Blank

Setting:	`remoteDir.ldap_other_number_attributes`
Description:	Sets the "other" number attributes.
Values:	Text string

Default: Blank

Setting:	`remoteDir.ldap_incall_lookup_enable`
Description:	Enables or disables LDAP incoming call lookup. If enabled, the VCS754 searches the LDAP directory for the incoming call number. If the number is found, the VCS754 uses the LDAP entry for CID info.
Values:	0 (disabled), 1 (enabled) **Default:** 0

Setting:	`remoteDir.ldap_outcall_lookup_enable`
Description:	Enables or disables LDAP outgoing call lookup. If enabled, numbers entered in pre-dial or live dial are matched against LDAP entries. If a match is found, the LDAP entry is displayed for dialing.
Values:	0 (disabled), 1 (enabled) **Default:** 0

Setting:	`remoteDir.broadsoft_enable`
Description:	Enables or disables the Broadsoft phonebook.
Values:	0 (disabled), 1 (enabled) **Default:** 0

Setting:	`remoteDir.broadsoft_display_name`
Description:	Sets the Broadsoft Phonebook display name.
Values:	Text string **Default:** Blank

Setting:	`remoteDir.broadsoft_server`
Description:	Sets the Broadsoft Phonebook IP address.
Values:	Text string **Default:** Blank

Setting:	`remoteDir.broadsoft_port`
Description:	Sets the Broadsoft Phonebook port.
Values:	1–65535 **Default:** 0

Setting:	`remoteDir.broadsoft_user_name`
Description:	Sets the Broadsoft Phonebook authentication user name.
Values:	Text string **Default:** Blank

Setting:	`remoteDir.broadsoft_password`		
Description:	Sets the Broadsoft Phonebook authentication password.		
Values:	Text string	**Default:**	Blank

Setting:	`remoteDir.broadsoft_dir_type`		
Description:	Sets the Broadsoft Phonebook directory type.		
Values:	Group, GroupCommon, Enterprise, EnterpriseCommon, Personal	**Default:**	Group

Setting:	`remoteDir.ldap_check_certificate`		
Description:	Enables or disables accepting only a trusted LDAP certificate.		
Values:	0 (disabled), 1 (enabled)	**Default:**	0

Setting:	`remoteDir.broadsoft_check_certificate`		
Description:	Enables or disables accepting only a trusted Broadsoft certificate.		
Values:	0 (disabled), 1 (enabled)	**Default:**	0

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"web" Module: Web Settings

The web settings control the web server IP, port, and security settings.

The web settings follow the format: web.[element].

All the web settings are included in the general configuration file.

Setting:	`web.http_port`
Description:	Sets the http port when http is enabled.
Values:	1–65535 **Default:** 80

Setting:	`web.https_enable`
Description:	Sets server to use the https protocol.
Values:	0 (disabled), 1 (enabled) **Default:** 0

Setting:	`web.https_port`
Description:	Sets the https port when https is enabled.
Values:	1–65535 **Default:** 443

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"user_pref" Module: User Preference Settings

The user settings are accessible to the VCS754 user. These settings are useful for initial setup. You may wish to remove these settings from auto-provisioning update files so that users do have their own settings overwritten.

The user preference settings follow the format: user_pref.[element].

The user preference settings are exported when you manually export the configuration from the VCS754.

General configuration file settings

Setting:	`user_pref.account.x.ringer`
Description:	Sets the ring tone for account x.
Values:	1–10 **Default:** 1

Setting:	`user_pref.web_language`
Description:	Sets the language that appears on the WebUI. English, French and Spanish are available.
Values:	en, fr, es **Default:** en

MAC-specific configuration file settings

Setting:	`user_pref.language`
Description:	Sets the language that appears on the device screen. English, French and Spanish are available.
Values:	en, fr, es **Default:** en

Setting:	`user_pref.backlight_timeout`
Description:	Sets the backlight timeout in seconds.
Values:	10–60 **Default:** 30

Setting:	`user_pref.hold_reminder.enable`
Description:	Enables or disables audible hold reminder.
Values:	0 (disabled), 1 (enabled) **Default:** 1

Setting:	`user_pref.hold_reminder.interval`		
Description:	Sets the interval for the audible hold reminder in seconds.		
Values:	10–300	**Default:**	30

Setting:	`user_pref.call_waiting.tone_enable`		
Description:	Enables or disables the call waiting tone.		
Values:	0 (disabled), 1 (enabled)	**Default:**	1

Setting:	`user_pref.call_waiting.tone_interval`		
Description:	Sets the interval for the call waiting tone in seconds.		
Values:	10–60	**Default:**	30

Setting:	`user_pref.call_waiting.mode`		
Description:	Enables or disables rejecting calls if already on a call.		
Values:	0 (disabled), 1 (enabled)	**Default:**	1

Setting:	`user_pref.lcd_contrast`		
Description:	Sets the LCD contrast on the VCS754.		
Values:	1–7	**Default:**	4

Setting:	`user_pref.backlight`		
Description:	Sets the backlight brightness level.		
Values:	off, low, medium, high	**Default:**	high

Setting:	`user_pref.idle_backlight`		
Description:	Sets the backlight brightness level when the VCS754 is idle.		
Values:	off, low, medium, high	**Default:**	off

Setting:	`user_pref.absent_timeout`
Description:	Sets the absent timeout (the interval after going off hook with no action taken) in seconds. After the absent timeout, the phone returns to idle mode.

Values:	10–60	**Default:**	30

Setting:	`user_pref.speaker_volume`
Description:	Sets the speakerphone volume. This setting also applies to PC speakerphone mode.

Values:	1–9	**Default:**	5

Setting:	`user_pref.key_beep_enable`
Description:	Enables or disables key beeps on the VCS754.

Values:	0 (disabled), 1 (enabled)	**Default:**	1

"call_settings" Module: Call Settings

The call settings configure data related to a user's call preferences. The data is stored internally at /mnt/flash/CallSettings.xml.

All the call settings (except one) follow the format: call_settings.account.x.[element] where x is an account number ranging from 1 to 3.

All the call settings are included in the MAC-specific configuration file.

Setting:	`call_settings.account.x.block_anonymous_enable`
Description:	Enables or disables anonymous call blocking.
Values:	0 (disabled), 1 (enabled) **Default:** 0

Setting:	`call_settings.account.x.outgoing_anonymous_enable`
Description:	Enables or disables outgoing anonymous calls.
Values:	0 (disabled), 1 (enabled) **Default:** 0

Setting:	`call_settings.account.x.dnd_enable`
Description:	Enables or disables Do Not Disturb for account x.
Values:	0 (disabled), 1 (enabled) **Default:** 0

Setting:	`call_settings.account.x.dnd_incoming_calls`
Description:	Sets whether incoming calls are shown or rejected when DND is on for account x.
Values:	show, reject **Default:** reject

Setting:	`call_settings.account.x.call_fwd_always_enable`
Description:	Enables or disables Call Forward Always for account x.
Values:	0 (disabled), 1 (enabled) **Default:** 0

Setting:	`call_settings.account.x.call_fwd_always_target`
Description:	Sets the Call Forward Always target number for account x.
Values:	Text string **Default:** Blank

Setting:	`call_settings.account.x.call_fwd_busy_enable`
Description:	Enables or disables Call Forward Busy for account x.
Values:	0 (disabled), 1 (enabled) **Default:** 0

Setting:	`call_settings.account.x.call_fwd_busy_target`
Description:	Sets the Call Forward Busy target number for account x.
Values:	Text string **Default:** Blank

Setting:	`call_settings.account.x.cfna_enable`
Description:	Enables or disables Call Forward No Answer for account x.
Values:	0 (disabled), 1 (enabled) **Default:** 0

Setting:	`call_settings.account.x.cfna_target`
Description:	Sets the Call Forward No Answer target number for account x.
Values:	Text string **Default:** Blank

Setting:	`call_settings.account.x.cfna_delay`
Description:	Sets the Call Forward No Answer delay (in number of rings) for account x.
Values:	1–10 **Default:** 6

"speed_dial" Module: Speed Dial Settings

The speed dial key settings configure the dial pad keys for speed dialing pre-programmed phone numbers. When configured, the VCS754 user can press and hold a dial pad key to dial a programmed phone number.

The speed dial key settings follow the format speed_dial.x.[element], where x is the dial pad key, ranging from 1 to 0 (with 0 being the "0" OPERATOR key).

All the speed dial settings are included in the MAC-specific configuration file.

Setting:	`speed_dial.x.name`
Description:	Sets the name associated with the phone number for dial pad key x. The name is visible on the VCS754 LCD.
Values: Text string	**Default:** Blank

Setting:	`speed_dial.x.number`
Description:	Sets the phone number that dial pad key x dials when pressed and held.
Values: Text string (SIP URI)	**Default:** Blank

Setting:	`speed_dial.x.account`
Description:	Sets the SIP account used for dialing when dial pad key x is pressed and held.
Values: 0–3 (0 is the default account)	**Default:** 0

"ringersetting" Module: Distinctive Ringer Settings

The distinctive ringer settings configure the distinctive ringer feature. For more information, see *"Ringer Settings" on page 46*. You can configure up to 8 instances of the distinctive ringer feature.

The ringer setting parameters follow the format ringersetting.x.[element], where x is the instance of the setting, ranging from 1 to 8.

All the ringer settings are included in the general configuration file.

Setting: `ringersetting.x.ringer_text`

Description: Enter the text that will match the "info" parameter and play the ringer tone. The matching of the "info" parameter and ringer_text setting is case sensitive.

Values: Text string (max. 40   **Default:**   Blank
             characters)

Setting: `ringersetting.x.ringer_type`

Description: Select the desired ring tone for ringer setting x.

Values: 1–10   **Default:**   1

"file" Module: Imported File Settings

The "file" parameters enable the provisioning file to import additional configuration files of various types, including:

- Contact lists
- Security certificates

The following certificates are supported:

- Per-account TLS certificate (you can choose to use the Account 1 certificate for all accounts)
- Broadsoft directory
- LDAP
- Web server (the VCS754 has a default self-signed web server certificate)
- Provisioning
- Languages

File parameter values are URLs that direct the VCS754 to the location of the file to be imported.

None of these settings are exported when you manually export the configuration from the VCS754.

General configuration file settings

Setting:	`file.https_user.certificate`		
Description:	URI of HTTPS server certificate to be imported; for example, <protocol>://<user>:<password>@<host>:<port>/<url-path>		
Values:	Text string	Default:	Blank

Setting:	`file.provisioning.trusted.certificate`		
Description:	URI of provisioning certificate to be imported; for example, <protocol>://<user>:<password>@<host>:<port>/<url-path>		
Values:	Text string	Default:	Blank

Setting:	`file.sips.trusted.certificate.x`		
Description:	URI of SIPS (TLS transport) certificate to be imported for account x; for example, <protocol>://<user>:<password>@<host>:<port>/<url-path>		
Values:	Text string	Default:	Blank

MAC-specific configuration file settings

Setting:	`file.broadsoft.trusted.certificate`
Description:	URI of Broadsoft certificate to be imported; for example, <protocol>://<user>:<password>@<host>:<port>/<url-path>
Values:	Text string **Default:** Blank

Setting:	`file.contact.directory.append`
Description:	URL of contact directory to be imported. Entries in the imported file will be added to existing directory entries.
Values:	Text string **Default:** Blank

Setting:	`file.contact.directory.overwrite`
Description:	URL of contact directory to be imported. Entries in the imported file will replace all existing directory entries.
Values:	Text string **Default:** Blank

Setting:	`file.contact.blacklist.append`
Description:	URL of contact blacklist to be imported. Entries in the imported file will be added to existing blacklist entries.
Values:	Text string **Default:** Blank

Setting:	`file.contact.blacklist.overwrite`
Description:	URL of contact blacklist to be imported. Entries in the imported file will replace all existing directory entries.
Values:	Text string **Default:** Blank

"tone" Module: Tone Definition Settings

The Tone Definition settings configure data for various tones for the purpose of localization. The Audio Manager component uses the data from this model to populate the mcu on bootup.

Each tone definition must be a string of 12 elements separated by a space:

`"<num of freq> <freq1> <amp1> <freq2> <amp2> <freq3> <amp3> <freq4> <amp4> <on duration> <off duration> <repeat count>"`

Where:

`<num of freq>: 0-4`

`<freq1>: 0-65535`

`<amp1>: -32768-32767`

`<freq2>: 0-65535`

`<amp2>: -32768-32767`

`<freq3>: 0-65535`

`<amp3>: -32768-32767`

`<freq4>: 0-65535`

`<amp4>: -32768-32767`

`<on duration>: 0-2^32`

`<off duration>: 0-2^32`

`<repeat count>: 0-65535`

All the tone definition settings are included in the general configuration file.

Setting:	`tone.call_waiting_tone.num_of_elements`
Description:	Sets the number of elements for the call waiting tone.
Values:	1–5 **Default:** 1

Setting:	`tone.call_waiting_tone.element.1`
Description:	Defines the call waiting tone element 1.
Values:	Tone element string **Default:** 1 440 -120 0 0 0 0 0 0 500 0 1

Setting:	`tone.call_waiting_tone.element.x`
Description:	Defines the call waiting tone element x.
Values:	Tone element string

Default: Blank

Setting:	`tone.hold_reminder_tone.num_of_elements`
Description:	Sets the number of tone elements for the hold reminder tone.
Values:	1–5

Default: 1

Setting:	`tone.hold_reminder_tone.element.1`
Description:	Defines the hold reminder tone element 1.
Values:	Tone element string

Default: 1 770 -120 0 0 0 0 0 300 0 1

Setting:	`tone.hold_reminder_tone.element.x`
Description:	Defines the hold reminder tone element x.
Values:	Tone element string

Default: Blank

Setting:	`tone.inside_dial_tone.num_of_elements`
Description:	Sets the number of tone elements for the dial tone.
Values:	1–5

Default: 1

Setting:	`tone.inside_dial_tone.element.1`
Description:	Defines the inside dial tone element 1.
Values:	Tone element string

Default: 2 440 -180 350 -180 0 0 0 0 4294967295 0 65535

Setting:	`tone.inside_dial_tone.element.x`
Description:	Defines the inside dial tone element x.
Values:	Tone element string

Default: Blank

Setting:	`tone.stutter_dial_tone.num_of_elements`
Description:	Sets the number of tone elements for the stutter dial tone.
Values:	1–5

Default: 2

Setting:	`tone.stutter_dial_dial_tone.element.1`		
Description:	Defines the stutter dial tone element 1.		
Values:	Tone element string	**Default:**	2 440 -180 350 -180 0 0 0 0 100 100 10

Setting:	`tone.stutter_dial_dial_tone.element.2`		
Description:	Defines the stutter dial tone element 2.		
Values:	Tone element string	**Default:**	2 440 -180 350 -180 0 0 0 0 4294967295 0 65535

Setting:	`tone.stutter_dial_tone.element.x`		
Description:	Defines the stutter dial tone element x.		
Values:	Tone element string	**Default:**	Blank

Setting:	`tone.busy_tone.num_of_elements`		
Description:	Sets the number of tone elements for the busy tone.		
Values:	1–5	**Default:**	2

Setting:	`tone.busy_tone.element.1`		
Description:	Defines the busy tone element 1.		
Values:	Tone element string	**Default:**	2 480 -180 620 -180 0 0 0 0 500 500 65535

Setting:	`tone.busy_tone.element.x`		
Description:	Defines the busy tone element x.		
Values:	Tone element string	**Default:**	Blank

Setting:	`tone.ring_back_tone.num_of_elements`		
Description:	Sets the number of tone elements for the ringback tone.		
Values:	1–5	**Default:**	1

Setting:	`tone.ring_back_tone.element.1`		
Description:	Defines the ringback tone element 1.		
Values:	Tone element string	**Default:**	2 440 -180 480 -180 0 0 0 0 2000 4000 65535

Setting:	`tone.ring_back_tone.element.x`		
Description:	Defines the ringback tone element x.		
Values:	Tone element string	**Default:**	Blank

"profile" Module: Password Settings

The password settings allow you to set the default administrator and user passwords in the configuration file. The administrator password is usually included in the general configuration file, while the user password is usually included in the MAC-specific configuration file. The passwords can also be set using the WebUI. Be aware that scheduled provisioning configuration file updates may reset these passwords.

General configuration file settings

Setting:	`profile.admin.password`		
Description:	Sets the administrator password for accessing the admin menus on the VCS754 and the WebUI.		
Values:	Text string (15 characters maximum)	**Default:**	admin

MAC-specific configuration file settings

Setting:	`profile.user.password`		
Description:	Sets the user password for logging on to the WebUI and editing user-accessible settings.		
Values:	Text string (15 characters maximum)	**Default:**	user

"page_zone" Module: Paging Zone Settings

The paging zone settings allow you to define a maximum of 10 paging zones that the VCS754 can use for multicast paging.

The paging zone parameters (except for page_zone.call_priority_threshold) follow the format page_zone.x.[element], where x is the paging zone ID number, ranging from 1 to 10.

All the paging zone settings are included in the general configuration file.

Setting:	`page_zone.x.name`		
Description:	Sets the paging zone name, which appears on VCS754 LCD for outgoing and incoming multicast pages. A maximum of 15 characters is allowed.		
Values:	Text string	**Default:**	Blank

Setting:	`page_zone.x.multicast_address`		
Description:	Enter the multicast IP address that the VCS754 will monitor. The range of valid IP addresses is 224.0.0.0 to 239.255.255.255.		
Values:	IPv4 IP address	**Default:**	Blank

Setting:	`page_zone.x.multicast_port`		
Description:	Enter the multicast port associated with the multicast IP. The range of valid ports is 1 to 65535.		
Values:	1–65535	**Default:**	Blank

Setting:	`page_zone.x.accept_incoming_page`		
Description:	Enables or disables the VCS754 from receiving incoming multicast pages for that paging zone. If disabled, the VCS754 can make outgoing multicast pages only.		
Values:	0 (disabled), 1 (enabled)	**Default:**	1

Setting:	`page_zone.x.priority`		
Description:	Set the paging zone priority from 1 to 10. Zones with a priority higher than another zone can interrupt the lower-priority zone's active page.		
Values:	1–10	**Default:**	5

Setting:	`page_zone.call_priority_threshold`
Description:	Set the call_priority_threshold. If the paging zone priority (page_zone.x.priority) is higher or equal to the call priority, then a multicast page can interrupt an active, dialing, or incoming call.
Values:	1–10 **Default:** 2

"softkey" Module: Custom Soft Key Settings

The custom soft key settings allow you to select which soft keys can appear on the Idle screen, the Call Active screen, the Call Held screen and the Live Dial screen. You can also specify the position of each soft key. Softkeys appear on the VCS754 screen in the same order as the softkey values you enter. Enter soft key values separated by commas. For more information, see *"Customizing Soft Keys" on page 14*. You can specify a maximum of nine soft keys (three levels) for each parameter.

The soft key parameters follow the format softkey.[element].

Setting:	`softkey.idle`		
Description:	Specifies the soft keys visible on the idle screen.		
Values:	blank, dir, call_log, redial, message, dnd, cfwd, cfna, cfwd_all, cfwd_busy, intercom, retrieve, callback, grp_pickup, dir_pickup, line, settings, pc_spk	**Default:**	redial,line,pc_spk,call_log, blank,dir

Setting:	`softkey.call_active`		
Description:	Specifies the soft keys visible on the active call screen.		
Values:	blank, new, park_call, end, hold, transfer, conf, xferline, confline	**Default:**	end,transfer,conf,xferline, confline

Setting:	`softkey.call_held`		
Description:	Specifies the soft keys visible on the held call screen.		
Values:	blank, new, park_call, retrieve, grp_pickup, dir_pickup, end, resume, transfer, conf, xferline, confline	**Default:**	end,new,resume,transfer, conf,xferline,confline

Setting:	`softkey.live_dial`		
Description:	Specifies the soft keys visible on the live dial screen.		
Values:	blank, dir, call_log, redial, message, end, dial, input, cancel, backspc	**Default:**	backspc,input,dial

C H A P T E R   6

TROUBLESHOOTING

If you have difficulty with your VCS754 conference phone, please try the suggestions below.

> **NOTE** For customer service or product information, contact the person who installed your system. If your installer is unavailable, visit our website at *businessphones.vtech.com* or call **1 (888) 370-2006**.

Common Troubleshooting Procedures

Follow these procedures to resolve common issues. For more troubleshooting information, see the user's manual for your product.

Screen is blank.

- Make sure the DC power cable is securely plugged into base unit and the power adapter. Make sure the AC power cord is securely plugged into the power adapter and a wall outlet not controlled by a wall switch.

Pages are not received.

- The Page auto answer setting is set to Manual. Check the General Account Settings.

The firmware upgrade or configuration update isn't working.

- Before using the WebUI, ensure you have the latest version of your web browser installed. Some menus and controls in older browsers may operate differently than described in this manual.

■ Ensure you have specified the correct path to the firmware and configuration files on the **SERVICING > Firmware Upgrade > Auto Upgrade** page and the **SERVICING > Provisioning** page.

■ If the phone is not downloading a MAC-specific configuration file, ensure the filename is all upper case.

Provisioning: "Use DHCP Option" is enabled, but the VCS754 is not getting a provisioning URL from the DHCP Server.

■ Ensure that DHCP is enabled in Network settings.

APPENDIXES

Appendix A: Specifications

RF frequency band:	1921.536–1928.448 MHz
Channels:	5
Operating temperature:	32–122 °F (0–50 °C)
Power requirements:	Wireless mic: Li-ion Battery Pack; 3.7V; 240mAH rechargeable battery Base unit adapter: Input: 100–240V AC 50/60Hz Output: 9V DC @ 1500mA

Appendix B:Soft Keys

The table below provides an alphabetical list of the labels that appear above the VCS754 soft keys.

Label	Description
abc/ABC/123	Selects the text format for input
Add	Displays the new directory group editor
Add dot	Enters dot in IP editing field
Answer	Answers an incoming call
Back	Shows the previous screen
Backspc	Moves cursor back to correct entries in text editing fields
Blind	Starts the blind transfer process for the active call
Bridge	Joins the two active calls in a conference and returns to idle screen
Callback	Dials the last missed caller
Cancel	Quits the current page without saving any settings
Conf.	Opens the live dialing editor to enter or insert digits for the conference target
ConfLine	Displays a list of held calls as a target for conferencing with the active call
Del. All	Deletes all records in a list
Delete	1) Deletes current entry 2) Deletes assignment 3) Deletes Directory group
Dial	Sends and dials currently displayed/highlighted digits
Directory	Opens the list of available directories
Edit	Go to entry/group editor
EditDial	Edits a number stored in a list before dialing
End	1) Closes the current page 2) Ends the current call
Exit	Exits the current screen and returns to the previous menu
FirstNme	Sorts the directory by first name
Forward	Opens the predial editor to begin forwarding a call
Insert	Inserts a number from the directory or call history to a live dialing screen
LastNme	Sorts the directory by last name
Line	Switches between registered lines
New	Press to predial a new call during a call currently put on hold

Label	Description
No	Returns to the previous screen
Reject	Rejects an incoming call
Resume	Resumes a call put on hold
Save	1) Saves current setting 2) Begins save process
Search	Opens the Directory search editor; begins a search
Select	Selects a highlighted option
Settings	Opens the User settings menu
Set Conf	Confirms to set up conference
SetXfer	Confirms to transfer call
Split	Breaks a conference or call progress into multiple calls
Status	Access the status submenu
Transfer	Opens the live dialing editor to enter or insert digits of the transfer target
Type	Switches between the Directory number types within an entry
View	Displays a list of missed calls, messages, or a call history folder
XferLine	Displays a list of held calls as a transfer target for the active call
Yes	Confirm

Appendix C: Maintenance

Taking care of your telephone

- Your VCS754 conference phone contains sophisticated electronic parts, so you must treat it with care.

- Avoid rough treatment.

- Save the original packing materials to protect your VCS754 conference phone if you ever need to ship it.

Avoid water

- You can damage your VCS754 conference phone if it gets wet. Do not install the VCS754 conference phone near a sink, bathtub or shower.

Electrical storms

- Electrical storms can sometimes cause power surges harmful to electronic equipment. For your own safety, take caution when using electric appliances during storms.

Cleaning your telephone

- Your VCS754 conference phone has a durable plastic casing that should retain its luster for many years. Clean it only with a soft cloth slightly dampened with water or a mild soap.

- Do not use excess water or cleaning solvents of any kind.

Remember that electrical appliances can cause serious injury if used when you are wet or standing in water. If the VCS754 conference phone should fall into water, DO NOT RETRIEVE IT UNTIL YOU UNPLUG THE POWER CORD AND NETWORK CABLE FROM THE WALL, then pull the unit out by the unplugged cords.

Appendix D: Important Safety Information

> ⚠️ **WARNING** *This symbol is to alert you to important operating or servicing instructions that may appear in this user's manual. Always follow basic safety precautions when using this product to reduce the risk of injury, fire, or electric shock.*

When using your VCS754 SIP Conference Phone with Wireless Mics, basic safety precautions should always be followed to reduce the risk of fire, electric shock and injury to persons, including the following:

1. Read and understand all instructions.

2. Follow all warnings and instructions marked on the product.

3. Unplug this product from the wall outlet before cleaning. Do not use liquid or aerosol cleaners. Use a damp cloth for cleaning.

4. Do not use this product near water such as near a bathtub, wash bowl, kitchen sink, laundry tub or swimming pool, or in a wet basement or shower.

5. Do not place this product on an unstable table, shelf, stand or other unstable surfaces.

6. Slots and openings in the back or bottom of the product are provided for ventilation. To protect them from overheating, these openings must not be blocked by placing the product on a soft surface such as a bed, sofa or rug. This product should never be placed near or over a radiator or heat register. This product should not be placed in any area where proper ventilation is not provided.

7. This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply in your office, consult your dealer or local power company.

8. Do not allow anything to rest on the power cord. Do not install this product where the cord may be walked on.

9. Never push objects of any kind through the slots in the product because they may touch dangerous voltage points or create a short circuit. Never spill liquid of any kind on the product.

10. To reduce the risk of electric shock, do not disassemble this product, but take it to an authorized service facility. Opening or removing parts of the product other than specified access doors may expose you to dangerous voltages or other risks. Incorrect reassembling can cause electric shock when the product is subsequently used.

11. Do not overload wall outlets and extension cords.

12. Unplug this product from the wall outlet and refer servicing to an authorized service facility under the following conditions:

    - When the power supply cord or plug is damaged or frayed.
    - If liquid has been spilled onto the product.
    - If the product has been exposed to rain or water.

- If the product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operation instructions. Improper adjustment of other controls may result in damage and often requires extensive work by an authorized technician to restore the product to normal operation.

- If the product has been dropped and the product has been damaged.

- If the product exhibits a distinct change in performance.

13. Avoid using the VCS754 SIP Conference Phone with Wireless Mics during an electrical storm. There is a remote risk of electric shock from lightning.

14. Do not use the VCS754 SIP Conference Phone with Wireless Mics to report a gas leak in the vicinity of the leak. Under certain circumstances, a spark may be created when the adapter is plugged into the power outlet, or when the wireless mic is replaced in its cradle. This is a common event associated with the closing of any electrical circuit. The user should not plug the phone into a power outlet, and should not put a charged wireless mic onto the charging cradle, if the phone is located in an environment containing concentrations of flammable or flame-supporting gases, unless there is adequate ventilation. A spark in such an environment could create a fire or explosion. Such environments might include: medical use of oxygen without adequate ventilation; industrial gases (cleaning solvents; gasoline vapors; etc.); a leak of natural gas; etc.

15. Only put the wireless mic next to your mouth when it is in normal talk mode.

16. The power cables are intended to be correctly oriented in a vertical or floor mount position. The prongs are not designed to hold the plug in place if it is plugged into a ceiling or cabinet outlet.

17. For pluggable equipment, the socket-outlet shall be installed near the equipment and shall be easily accessible.

18. CAUTION: Use only the batteries indicated in this manual. There may be a risk of explosion if a wrong type of battery is used. Use only the supplied rechargeable battery or replacement battery pack (BT191665/BT291665). Do not dispose of batteries in a fire. They may explode. Dispose of used battery according to the information in **The RBRC® seal**.

19. Use only the adapter included with this product. Incorrect adapter polarity or voltage can seriously damage the product. Base unit power adapter: Input 100–240V AC 50/60Hz; Output: 9V DC 1500mA.

⚠️ CAUTION *Use only the power adapter provided with this product. To obtain a replacement, visit our website at businessphones.vtech.com or call* **1 (888) 370-2006***.*

SAVE THESE INSTRUCTIONS

Appendix E: Industry Canada

Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference, including interference that may cause undesired operation.

The term "IC:" before the certification/registration number only signifies that the Industry Canada technical specifications were met.

This product meets the applicable Industry Canada technical specifications.

Appendix F: GPL License Information

Portions of the software associated with this product are open source, and fall within the scope of the GNU General Public License (GPL). Accordingly, those portions of code are available to the public, consistent with the requirements of the GPL, in either source code format or object code format, depending upon the nature of the code at issue. If you would like to exercise your right to receive the available code, please send a written request for the available code, along with a cashier's check, payable to VTech Communications, Inc., in the amount of $15.00 (U.S.$) to:

VTech Communications, Inc.,
9590 SW Gemini Drive, Suite 120
Beaverton OR 97008
ATTN: Information Technology Group—VCS754 GPL code request

If your request does not fully comply with the foregoing requirements, VTech reserves the right to reject your request. Further, by requesting and receiving the available code, you release VTech, its affiliates, and its and their officers, directors, employees, and representatives ("VTech Parties") from any liability or responsibility relating to such code, and you acknowledge that the VTech Parties make no representations with respect to the origin, accuracy, usability, or usefulness of such code, and the VTech Parties have no responsibility to you whatsoever concerning the code, including without limitation any responsibility to provide explanation, support, upgrade, or any communication whatsoever. Your review or use of the available code is at your sole risk and responsibility.