VTGO-PC Multilab
v.2.11

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Introduction

The VTGO-PC Multi-Lab Softphone is able to simultaneously run up to five softphone instances impersonating Cisco 79xx series phones on a single PC. Each softphone instance is independent from another; instances can connect to single or multiple CUCM and CUCME IP telephony systems.

A configuration wizard has been provided that will facilitate the setup of each phone instance for lab experimentation.

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Client PC Requirements

Table 1 Minimum requirements for IP blue Multi-Lab Softphone

Item	Description
Internal Hardware	Note: IP blue has tested Interpreter softphone on x86-based processors running a 32-bit OS; 64-bit OSs have not been tested and are not currently supported. • 1.5-gigahertz (GHz) 32-bit (x86) processor or higher. • Disk space: 200 MB free disk space • Memory: 2 GB RAM or higher • A sound card (integrated or PCI-based) for ring tones and system sounds. • Speakers to play ring tones and system sounds. • A 10/100 Mbps full duplex Ethernet network interface card • XGA video card 1024 x 768 x 16-bit or better
Software OS Versions	• Windows XP with Service Pack 3 (SP3) • Windows Vista Business, Enterprise, Ultimate with Service Pack 2 (SP2)
IP Network Connectivity	• At least 160 kbps of symmetrical (upload/download) bandwidth or higher per active interpretation session using G.711 x 2 Phone Calls. • IP connection via wired LAN or DSL/Cable modem (for remote users) • M5 will be installing a QOS enabled T1 to each Hospital site. • Enable QOS via DSCP for routing prioritization from Network Card in end user PC through Network Switches and routers in path to M5 provided router. • Failover to Internet for transport backup to M5 if primary T1 fails. • Open TCP/UDP ports in Firewalls as detailed in the Port Requirement Page . • Multicast Enabled on Switch Ports and Routers between Agent and Supervisor subnets for Agent / Supervisor Monitoring.
USB Headsets and adapters	• USB Headsets from Plantronics • Plantronics DA60 USB Headset Adapter
Remote diagnostics	IP blue will require one of the following to provide remote support for Interpreter and Supervisor Stations. VNC 4 running as service on Interpreter PCs for remote support. Internet Access to http://www.ipblue.com with redirect to Citrix go to assist web site https://broker.gotoassist.com
Software Licensing	One Time Access to license.ipblue.com for softphone activation on PC.

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Quick Start

Cisco Call Manager Server (Cisco Call Manager Administrator)

A phone must be defined in the Call Manager before you can run the VTGO-PC Multi-Lab client application. This is accomplished using the Call Manager Administration web page. Please follow the steps below:

1. Log into the Call Manager Server

2. Go to Device > Phone > Add a new phone. Select the phone type (7960)

3. Input the twelve-character hexadecimal MAC address of the network card of the PC or laptop on which VTGO-PC will be installed (examples: 000000001234 or 0a0b0c0d0e0f)

4. Set the device pool to default (or whatever is appropriate for your site)

5. Select a template that matches the number of lines needed on the base phone and then determine if a fourteen-button sidecar module is required. Select one or two if adding a sidecar module to the base. The maximum line count is thirty-four on all available templates. Click insert.

6. Click OK to configure the directory number for line 1 of VTGO-PC. You may add additional directory numbers as appropriate.

Dialing Rules

Click Tools > Dialing Rules (Ctrl + R) to set up custom dialing rules for VTGO-PC Multi Lab. Dialing Rules tell VTGO-PC Multi Lab how to prefix the phone numbers so Call Manager can properly route calls.

Note: If there are no dialing rules, users must enter phone numbers in the dialing box exactly as they need to be dialed (for example, in most companies this would be 9 + 1 + area code + number).

The dialing rules list is maintained in the order in which you create the rules. The system searches dialing rules from the top of the dialing rules list to the bottom of the list. When the search finds a match, that dialing rule gets used.

Tip: Create dialing rules in the order in which you want them to be used.

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Installation

Once you download the software, the InstallShield Wizard will run.

Once you click "Next," the End User License Agreement will appear on your screen. Read it carefully, then print it for your records.

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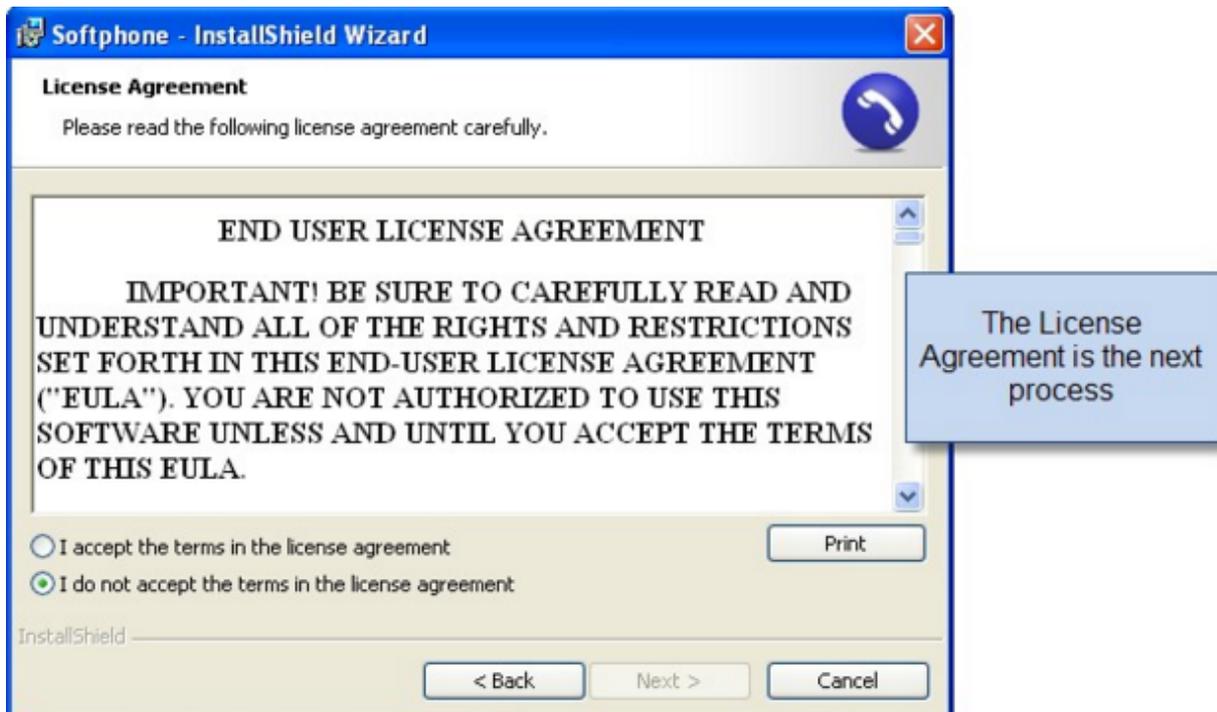
Installation Continued

Once you have read through the entire agreement, click on "I accept the terms in the license agreement." Click "Next."
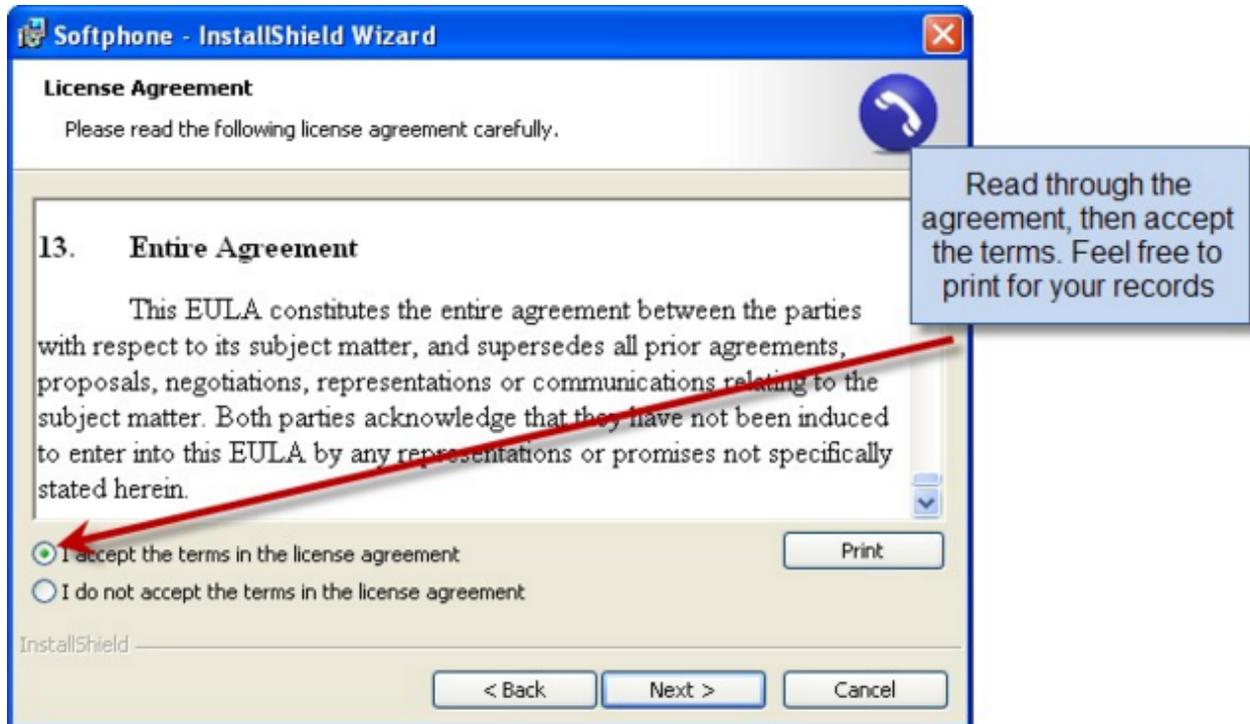
The InstallShield Wizard will ask you where you want to install the softphone. If you would like to change it from the default setting, click "Change."

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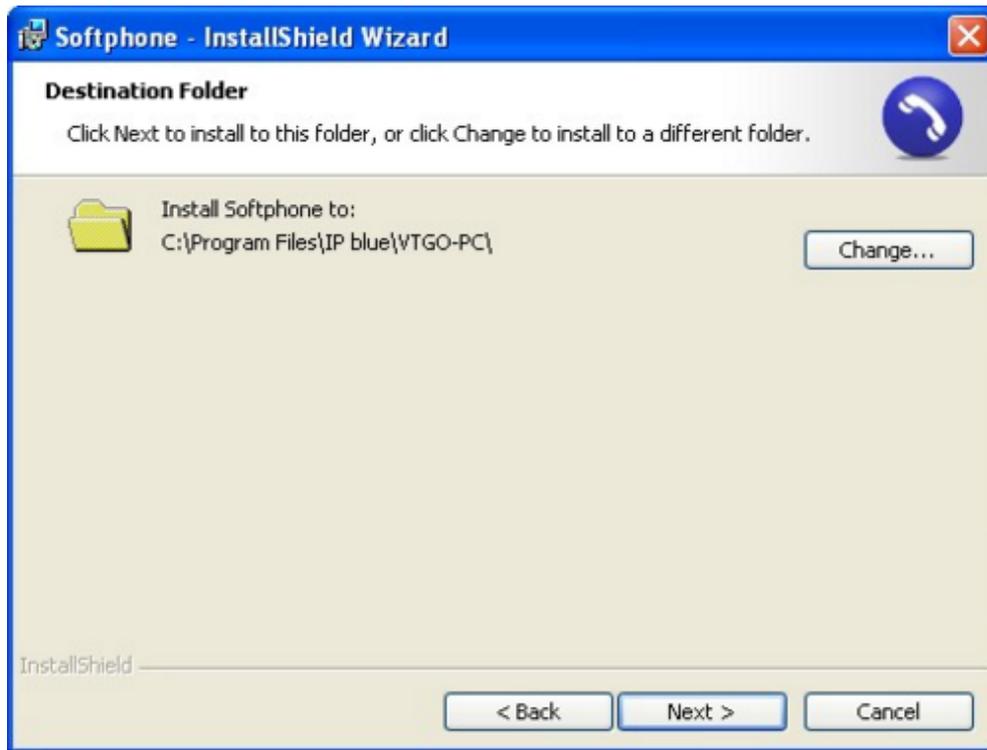
Licensing Softphone

Now you must license the softphone with the license key that you were given.

Fill in all of the fields, please be sure to enter the License Key correctly, it is case-sensitive.

Once you have completed this task, the InstallShield Wizard is completed. Click "Finish" to exit the InstallShield Wizard. Now You have successfully installed your softphone.

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Configuration Wizard

VTGO-PC Multi-Lab configuration wizard provides convenient way to configure all softphone instances in one place.

For each phone instance, enter TFTP server address, end-point MAC and phone type. If TFTP server field is left blank, softphone will use DHCP option 150 to auto-discover TFTP server.
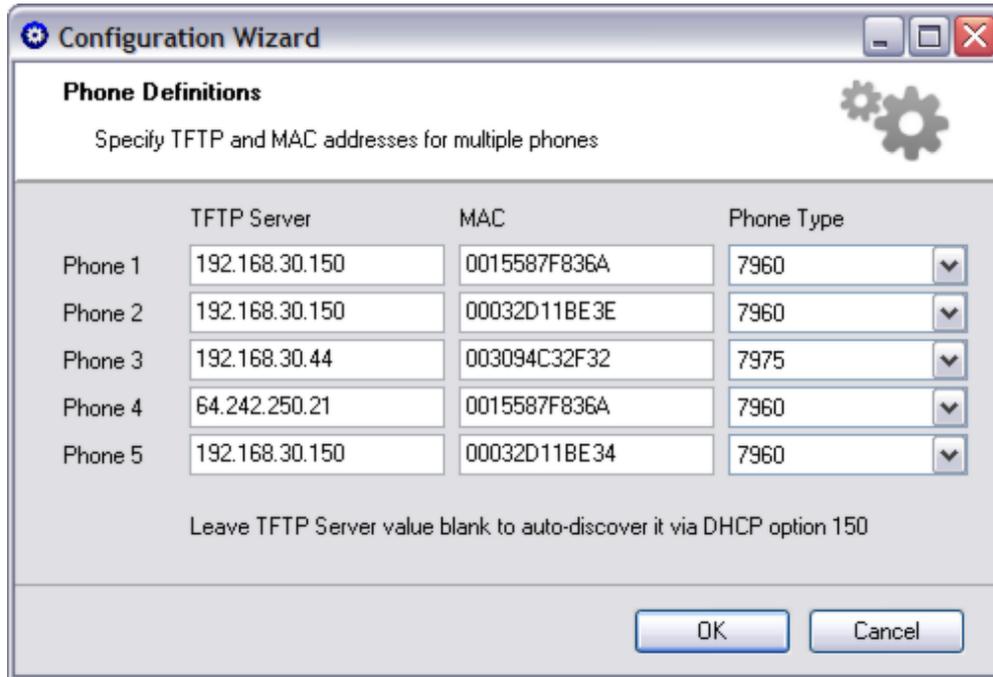
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Network and Web Settings

In order to use VTGO-PC Multi Lab, the softphone must be connected to a Call Manager or a Vocal data call agent. If DHCP option 150 is enabled on the network, the softphone will automatically register with the Call Manager. If it does not automatically fill in the fields, you will need to fill them in manually. Contact your system administrator for more details.

Note: TFTP server, MAC and phone type can also be specified in using Configuration Wizard.

The web settings give you the URL's where you will be able to find your information, directory, messages, services, idle, authentication, IPB Central and Call Manager user options.
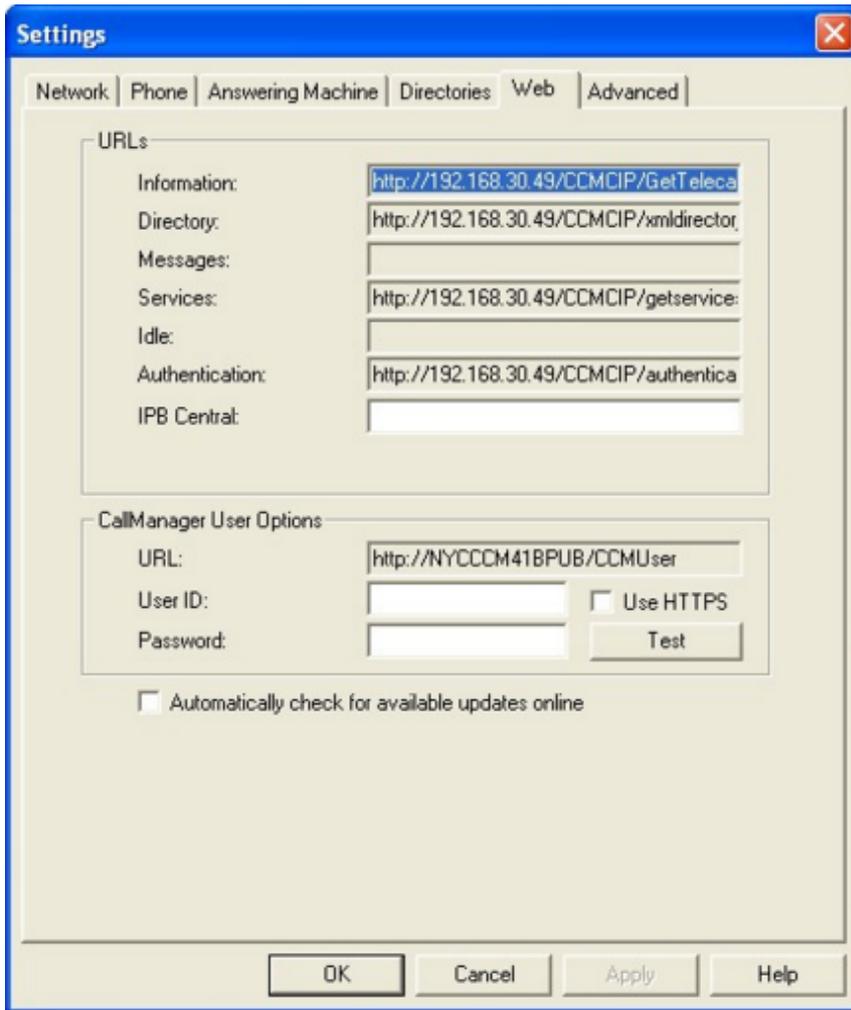
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Button Features

Button Features

> Answer/End Call: Click to accept an incoming call or hang up an existing call
> Dial: Click to make a call to the call destination in the Call Address Field or redial the last number dialed
> Hold/Resume: Click this button to place the active call on hold or retrieve a call from hold
> Transfer: This button toggles between Transfer and Finish TX, depending on whether the current call has a transfer initiated. Click this button to initiate a transfer during a call. Once the transfer is initiated, the button label changes to Finish TX, and it can be clicked again to complete the transfer (either immediately for fast transfer, or after announcing the call to the 3rd party)
> Park: Click to park the currently active call
> Pick up: Click to pick up a pending call within your local group
> Messages: Select a line and click "Messages" to go to the associated voice mail
> Directories: Click to access directories
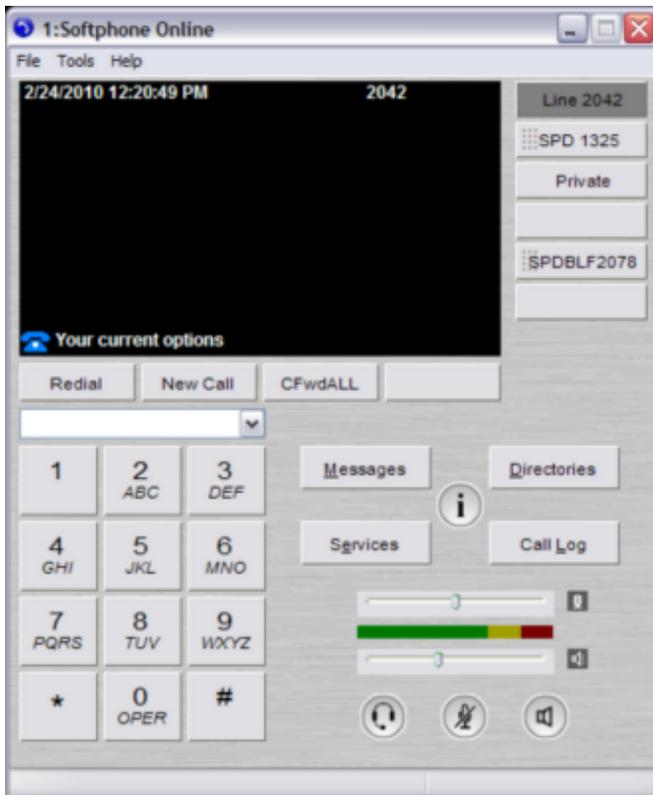
Default Skin   Cisco 7960 Skin

Using Multilab Softphone

Placing a Call

> Use your keyboard to type the number in the destination box and press Enter
> Use your mouse to click the keys on the online keypad and click Dial
> Open a VTGO-PC Multi Lab directory, click your mouse on the name of the person you want to dial and click Dial
> Copy the number from any Windows program, paste it into the destination box, and click Dial

Answering a Call

Click the Answer button on the VTGO-PC Multi Lab to answer an incoming call.

When VTGO-PC Multi Lab is running in the background and there is an incoming call, a call box appears informing you of the incoming phone call. You can choose to answer the call or reject it.

Ending a call

To disconnect a call, click the End Call bsoftkey or hit End button on your computer keyboard.

Placing a Call on Hold

To place an active call on hold, click the Hold softkey. While the call is on hold, caller information and the time on hold will be displayed in the call status display.

Call Forwarding

To forward calls, click the CFwdAll softkey, and enter the destination number. After entering the forwarded number, you will hear a double beep, and the calls will be forwarded to that number.

To deactivate call forwarding, click the CFwdAll softkey a second time. You can also deactivate call forwarding by clicking on the flashing red arrow.

Call Park

Call Park allows you to place a call on hold for retrieval by another party. To park a call, press More and Park during an active phone call. VTGO-PC Multi Lab will show you the number where the call is being parked. To retrieve the call, dial that number from another phone or VTGO-PC Multi Lab. If a parked call is not picked up within one minute, the call is returned to the party who initiated the call park.

Meet-Me Conference

VTGO-PC Multi Lab supports Meet-Me conferences. A Meet-Me conference allows a caller to dial a designated number and be connected to a conference call automatically. A Meet-Me conference requires a special conference number that is pre-configured in Call Manager for this purpose by a Call Manager administrator.

To establish a Meet-Me conference, click the New Call soft key on VTGO-PC Multi Lab, and click More to display the Meet-Me soft key. Click the Meet-Me soft key and dial the Meet-Me conference number. You have established a Meet-Me conference.

To join a Meet-Me conference, simply dial the Meet-Me conference number provided by the Meet-Me conference initiator. You do not need to press the Meet-Me soft key on VTGO-PC Multi Lab.

Transferring a Call

To transfer a call, follow the steps below:

1) During an active call, press the transfer button in the bar

2) In the transfer destination box, enter the new destination number and VTGO-PC Multi Lab will automatically place a call to the transfer destination.

3) Press transfer to complete the transfer. You also have the option of waiting for the receiving end to answer, pre-announcing the call, and then completing the transfer.

Conferencing a Call

You may add anyone to a conference call at any time. Follow the steps below to initiate a conference call:

1) Place a call to the first conference call destination.

2) Once you have established a connection, click the Confirm button in the button bar. This automatically puts the first caller on hold and provides a dial tone.

3) In the destination box, enter the second conference call destination. VTGO-PC Multi Lab automatically places the call for you.

4) Once you have established a connection, click the Confirm button to complete the conference.

5) Repeat steps two through four to add additional participants to the conference. A maximum of six participants are allowed per conference.

Leaving a Conference Call

You can leave a conference at any time by clicking the End Call button in the button bar. After you click End Call the phone will go back to idle mode.

Speed Dial

To use this function you must specify a speed dial number in the Cisco CallManager. Contact your CallManager administrator for assistance. You may also have access to the CallManager user administration page, whcih allows you to enter your own speed dials directly.

Barge

The barge feature allows a user to join a call that is already in progress. The user can monitor the call in progress and participate in the call. The feature supports shared lines only. A shared line is a directory number that appears on more than one device in a partition (in other words, a number that appears on two phones).

The barge soft key is only present when the target user has placed a phone call. Clicking the barge soft key automatically adds the user (initiator) to the shared line call (target).

When a barge initiator barges into a phone call, the users currently on the call receive a tone notifying them that someone has barged into the phone call.

When the barge initiator hangs up, the remaining users receive a disconnect tone, leaving the original call in progress. When the user to whom the barge was initiated releases the call, the barge initiator and the other users get disconnected. Additionally, when a user other than the barge initiator or barge target releases the call, all parties disconnect.

If the barge target puts the call on hold, puts it in a conference, or transfers it, the barge initiator gets disconnected from the call; the other users remain connected. If any other user

puts the call on hold, puts it in a conference, or transfers it, the barge initiator and the barge target remain connected to the call.

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VPN Support

VPN Support

The VTGO-PC application has been tested with Microsoft's PPTP VPN client and Cisco's IPSEC VPN client. To use VTGO-PC with a VPN connection, follow the steps below.

Microsoft VPN Client

To use the built-in Microsoft VPN client:

1. Establish the VPN connection before you run VTGO-PC.
2. Once the VPN connection is established, run VTGO-PC.
3. Once VTGO-PC is running, navigate to the Tools > Settings > Network Tab and select the VPN connection name from the network interface dropdown box. It will say something like "WAN (PPP/SLIP) interface."

Cisco VPN Client

To use the Cisco VPN client:

1. Run the Cisco VPN client application and establish a VPN connection.
2. Copy the IP address assigned by the VPN server from the VPN client information window.
3. Run VTGO-PC, navigate to the Tools > Settings > Network tab, and check the box next to the appropriate "Use Cisco VPN Client" checkbox. The VPN IP address should already be present in the field to the right; if it is not present, paste the VPN address into the address field.

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Hot-Switching from a Handset to a Headset

Hot-Switching from a Handset to a Headset

VTGO-PC Multi Lab supports several USB telephony devices. This is a list of some of the devices IP Blue currently supports:

PDT Cyberphone, Cyberphone-K, v550, V-Connect, Claritel i-750, Actiontec USB Adapter, Plantronics CS50

To place and answer calls with a USB handset, simply lift the handset and dial the number. To hang up, place the USB handset back in its cradle.

To switch from the handset to a headset, click the headset button on the front of VTGO-PC Multi Lab during a call. This will automatically switch the audio to the handset. The headset button will light up when it is clicked. You can then hang up the USB handset. To end the phone call, simply click End Call on VTGO-PC Multi Lab, or click the headset button. When the call is ended using the End Call soft key on VTGO-PC Multi Lab, the headset button will remain lit as the default audio device until the headset button is clicked and the light is off.

To switch back to the USB phone during a phone call, simply lift the USB handset and the call audio will automatically switch back to the USB.

Note: This switch is unnoticeable to the party on the other end of the phone call.

To place and answer calls using a headset, plug a headset into your sound card on the back of your computer.

Click the Headset button on the front of VTGO-PC Multi Lab. Note that clicking the headset button will generate dial tone.
You can use the headset in conjunction with all of the features on VTGO-PC Multi Lab, including the volume and mute buttons.

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Phone and Aswering Machine Settings

Phone Type: make sure that you have this set to 7960

Headset audio device: Enter the type of headset you will be using

Speakerphone device: Enter the microphone audio device used

Notifications device: the audio device used to play the ringtone

Recordings playback device: the audio device used to play recordings

Ring tone: choose what sound you would like when receiving a call

Ring volume: set how loud you would like your ring tone to be

Onhook dialing timeout value: The amount of rings before your phone call will timeout
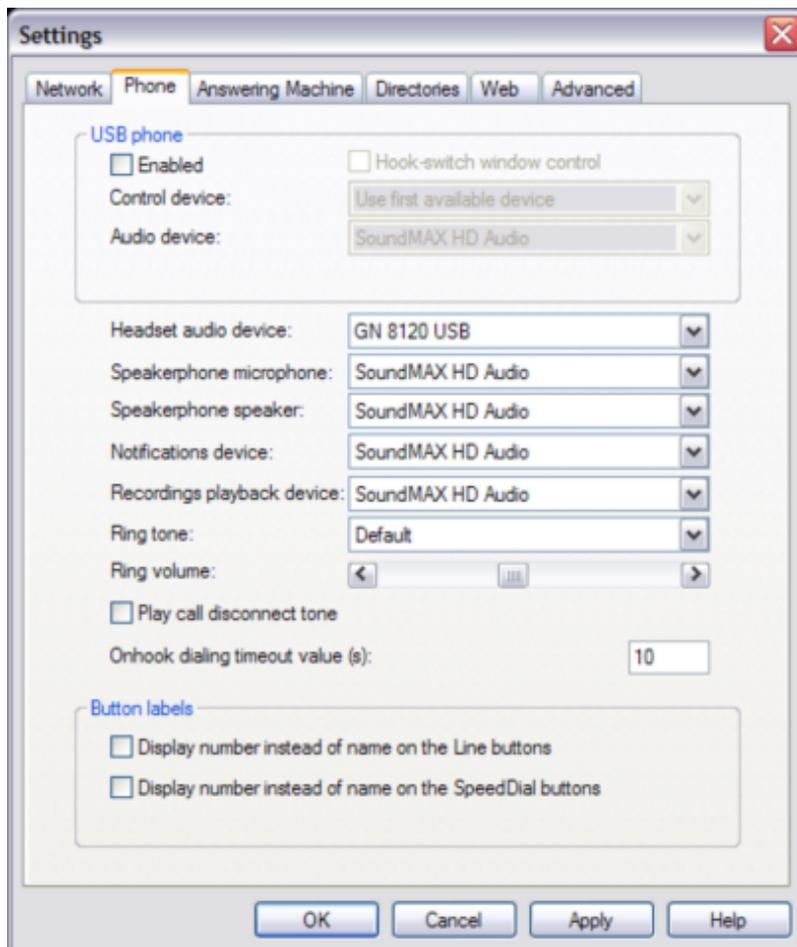
Here you can enable the phone to auto-answer after a specified number of rings.

You can also record a custom greeting

If you set the message wating alert it will play a specified tone once every xx seconds to let you know that there is a new message in your inbox.
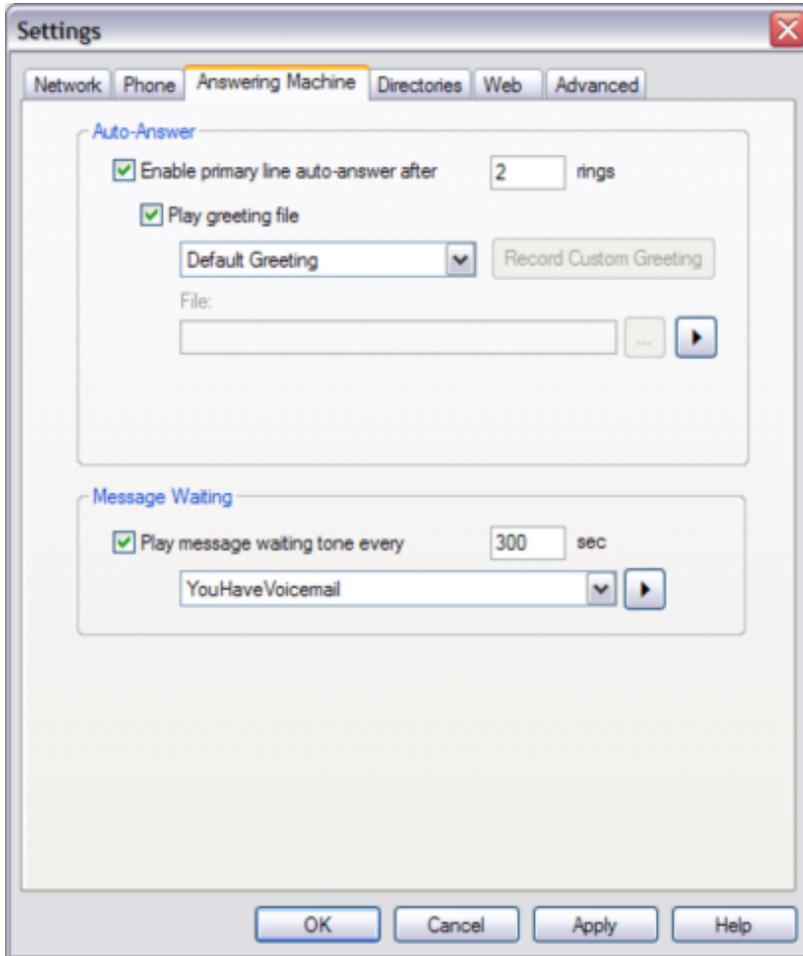
Directory, Call Log, Statistics

On your directories page you can view all of your contacts. Click on the drop-down menu and choose which contacts you would like to view. You can choose from CallManager's directory, LDAP, Outlook and Outlook Express.

Start typing in the Name field to narrow dow the list of matching contacts. Select the desired contact item and click Dial button or double click the item to initiate call.
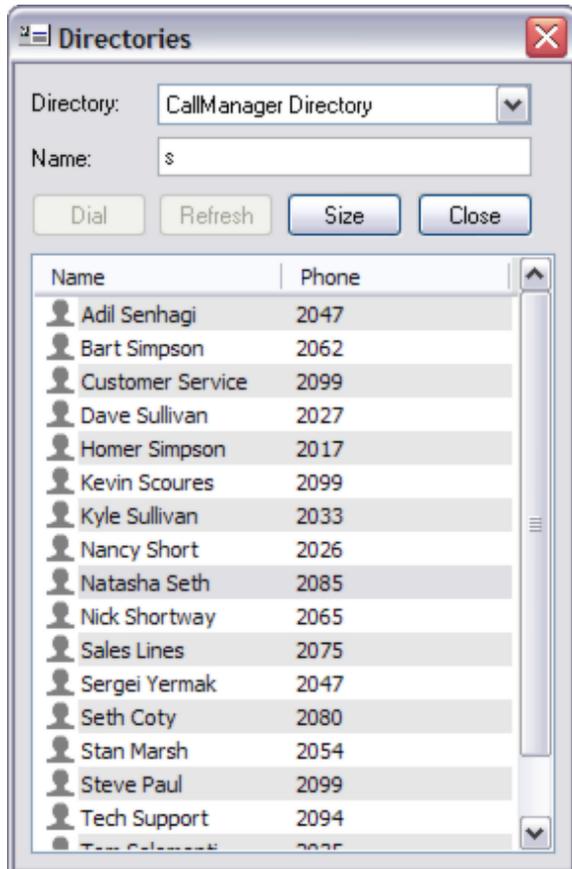
The Call Log shows you the number, whether the call was incoming or out-going, time of the call, length of the call, the status and how to listen to the recording of the call.

This screen shows detailed call statistics as well as the network interface, IP address and MAC address of the computer.

CallManager: IP address and port number of Call Manager to which VTGO PC Multi Lab is registered

Compression: the codec being used and frame size

Bytes sent: the number of bytes sent to the remote party

Jitter (ms): the inter arrival time of successive packets

Discard pkt: the number of packets that arrived too late for playback

Avg delay (ms): the average network delay over the duration of the call

Bytes recvd: the number of bytes received from the remote party

Max jitter (ms): the greatest inter-arrival time between any successive packets over the duration of the phone call

Lost pkt: the number of packets that never arrived for playback

Max delay (ms): the greatest network display over the duration of the call

Call Statistics

Station

Application run time: 1 minute
Network interface: Intel(R) PRO/1000 PL Network Connection -
IP address: 192.168.30.32
MAC Address: 00032D11BE3E
CallManager: 192.168.30.150:2000   v. 7.1.0.1(1)

Active Call

This Station   16386   23194   Remote Station
192.168.30.32   192.168.20.24
                           16386   23194

Compression:	G711u	Frame size:	20 ms
Bytes sent:	568288	Bytes recvd:	40569
Jitter (ms):	96	Max jitter (ms):	112
Discard pkt:	0	Lost pkt:	0
Avg delay (ms):	165	Max delay (ms):	271
Wireless QoS:	Not available (Intel PROSet/Wireless not found)		

Close

Advanced tab

Advanced tab

The Advanced tab in VTGO-PC Multi Lab should be configured with the help of an administrator.
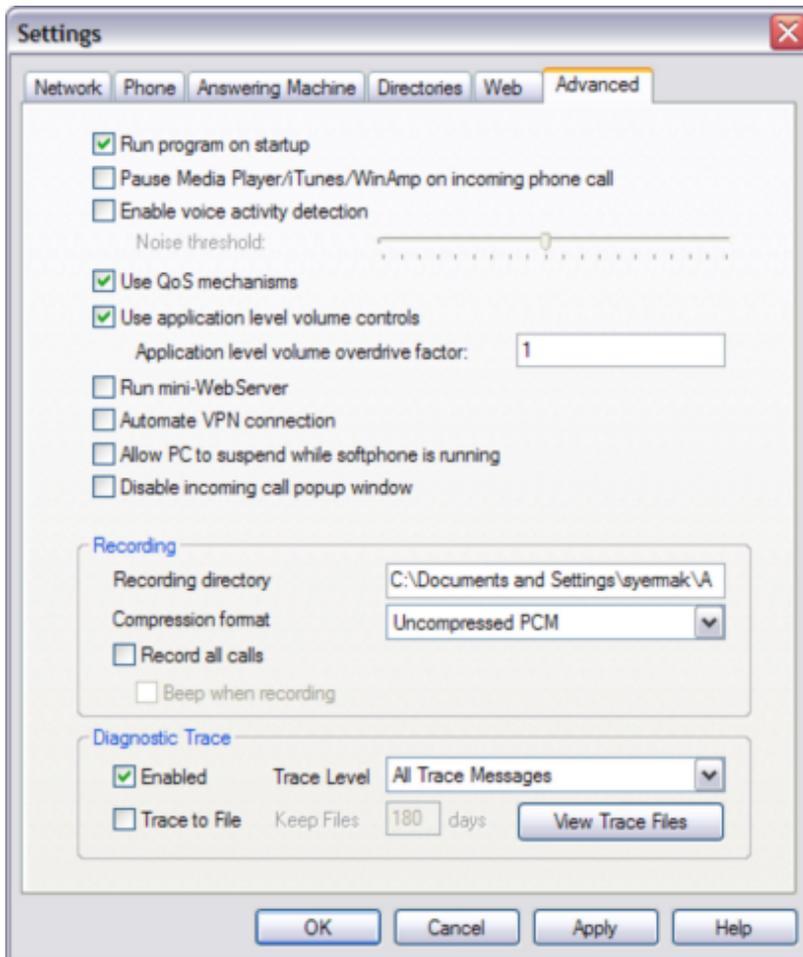
The "Use call audio mic buffer" should be used if there is a problem with your call audio. This can vary depending on the audio device you are using. If the other end of the phone call is experiencing audio distortion or static audio, you should configure this section. Increasing the mic buffer size will help resolve this issue.

Audio distortion can occur on an XP machine while using the PDT VoIP Voice V550 USB. If this occurs, you must check the "Use call audio mic buffer" check box and enter 60-100 as the value. On board audio devices (SoundMax or AC'97) on Win2000 can potentially cause long delays on the remote end if a mic buffer (of 30 ms) is not used.

Run program on startup: this setting will automatically launch the program when the computer starts.

Pause Media Player/iTunes/WinAmp on incoming phone call: this feature works with Windows Media Player 7, iTunes and WinAmp. VTGO-PC Multi Lab will mute these players

on an incoming call.

QoS mechanisms can be used to set the TOS bits (for Diffserv) and set higher OS priority levels on outgoing audio packets. However these mechanisms can cause failures in the audio path setup if the underlying network or the OS is not enabled for QoS (consult your administrator).

Application level volume control: VTGO-PC Multi Lab allows a user to control the volume of the computer from VTGO-PC Multi Lab's volume settings. In other words, when you adjust the volume within the program, it also adjusts the volume in the computer's audio settings. Using Application Level Volume Control does not change the volume level of any device on the computer.

Run mini Web Server: this feature allows a user to run services that make use of http push and RTP push. This is also useful for VTGO-PC Multi Lab diagnostics. In order to use extension mobility in Call Manager 3.2, a web server is required. By utilizing the mini Web Server, users can access services that make use of:

A) Remote device diagnostics

B) Voice Paging (RTP URI's)

C) Text Paging (http push)

D) File Transfer (VTGO to VTGO)

E) Extension Mobility

F) Remote configuration

Microsoft Outlook Integration

Using Microsoft Outlook with VTGO-PC

To dial directly from an Outlook contact form, you must select "Outlook Custom Contact Form" during the installation. This will add a dial button on the Outlook contact form that will access VTGO-PC Multi Lab.

If VTGO-PC Multi Lab is setup to use Outlook as one of the directories (as previously described), there will be three icons on your VTGO-PC Multi Lab screen:

The first icon is a contacts icon with a question mark. When you receive a call, VTGO-PC Multi Lab will try to find that contact in your contact list. If the caller is in the contact list, the question mark goes away.

If the call received contact is not in the Outlook directory, the question mark remains. If the caller is one of your contacts, clicking the caller will pull up that contact.

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Hot Keys

Control + Alt + V	Launch Softphone
Windows + V	Softphone to Foreground
Windows + A	Answer
Windows + X	Hang Up
Windows + C	New Call
Windows + S	Silent Voice Assist
Windows + O	Vocalize Current feature key set
F1 or Alt + H	Help
F2 then Arrow Keys	Active Microphone Gain Up and Down
F2 then Tab then Enter	Active Microphone Mixer
Pause Key	Mute/Un-Mute Active Microphone
F3 then Arrow Keys	Speaker Volume Up and Down
F3 then Tab then Enter	Active Speaker Mixer
F4	Jump to Headset button
Control + P	Select headset
Control + K	Select Speaker
F5	Last Number Redial
	Hold/Resume
	Backspace
	Answer
	Park Call
	Meet-me Conference
	Shared line barge-in
F6	New Call
	End Call
	Dial
	Conference
	Call Pick up
	Call Forward all calls
F7	Transfer
	Group Call Pickup
	Remove Last Conference Member
F8	More
	Cancel Input
F9	Jump to First Softkey
F10	File Menu
F11	Jump to First Line Key
F12	Jump to First Speed Dial Key
Alt + M or Control + M	Messages
Alt + E or Control + E	Open XML Services Window

Alt + D or Control + D	Open/Close Directory Window
Alt + L or Control + L	Open Call Log Window
Alt + D	Dial from Call Log
Alt + I or Control + T	Open Call Status Window
Alt + F	Show File Items
Alt + F4 or Control + Q	Quit Program
Alt + T	Tools Menu
Alt + T then K	Select Skin
Control + S	Settings Window

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