

X-Lite for Windows User Guide

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This manual corresponds to X-Lite version 4.7.0 and later.

Revision 5

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1 Introduction

X-Lite is a softphone from CounterPath that enables you to make VoIP voice and video calls, send and receive instant messages, share online status (presence) information, and exchange files.

Standard Telephone Features

The CounterPath X-Lite softphone has all standard telephone features, including:

- Call display and Message Waiting Indicator (MWI).
- Speakerphone and Mute.
- Redial, Hold, Do Not Disturb.
- Call history list of received, missed, and dialed calls.
- Three-party audio conferencing.
- Three-party video conferencing.

Enhanced Features and Functions

X-Lite also supports the following features and functions:

- Video
- IM and presence using the SIP SIMPLE protocol.
- Contact list containing the individual user's contacts.
- Support for DTMF (RFC 2833 or inband DTMF).
- Automatic detection and configuration of audio and video devices.
- Acoustic echo cancellation, automatic gain control, voice activity detection.
- Support for the following audio codecs:

Broadvoice-32, G.711aLaw, G.711uLaw, G.722, iLBC, OPUS, Speex, Speex Wideband.

• Support for the following video codecs:

H.263, H.263+ 1998.

- Automatic selection of the best codec based on the other party's capability, the available bandwidth, and network conditions. X-Lite switches the codec within a call in response to changing network conditions.
- For SIP and open standards to which X-Lite is compliant, visit http://www.counterpath.com/sip.html
- Compliance to 3261 SIP standard.
- Support for these firewall traversal solutions: STUN, TURN, or ICE.

2 Installation and Setup

2.1 Getting Ready

SIP Account Information

After choosing a VoIP service provider, you will need the following information:

- User name and domain. For example, 1331@domainA.com.
- Password
- Authorization Name (if applicable)
- Firewall traversal and other network information; see page 5.

2.2 Starting X-Lite

First-time Startup

If X-Lite is not already running, start it as you would any other program: Use the Windows Start menu or double-click the desktop icon.

2.3 Configuring X-Lite

Setting up Accounts

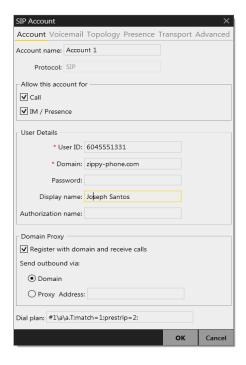
After obtaining SIP account information from your VoIP service provider, you can set up X-Lite accounts.

Set up the SIP Account

- 1. When the softphone appears, click the Go to Account Settings link. The SIP Account window appears.
- 2. In the Account tab, complete the User Details area with the information obtained from your VoIP service provider.
- 3. Complete the remaining tabs as specified by your service provider or to suit your setup. Settings that you may need to change immediately include:
 - Account tab, Domain Proxy area.
 - Topology tab, if your computer is on a network and/or behind a firewall.

For more information, see page 57.

4. Click OK; the account is created and registered (enabled).



Populating your Contact List

Typically, you will want to create contacts in order to easily make phone calls and send IMs.. You can:

- Add addresses to the Contact list one by one. See page 2.
- During a call that you place or receive, you can add the other party to your contact list. See "Handling an Established Call" on page 7.

For general information on contacts, see page 1.

2.4 Troubleshooting

X-Lite includes these tools for helping you troubleshoot problems:

- You can verify that your microphone, speakers and camera are working and can set the volume to a comfortable level without having to actually place a phone call.
- While you are on a phone call, you can test the quality of the audio

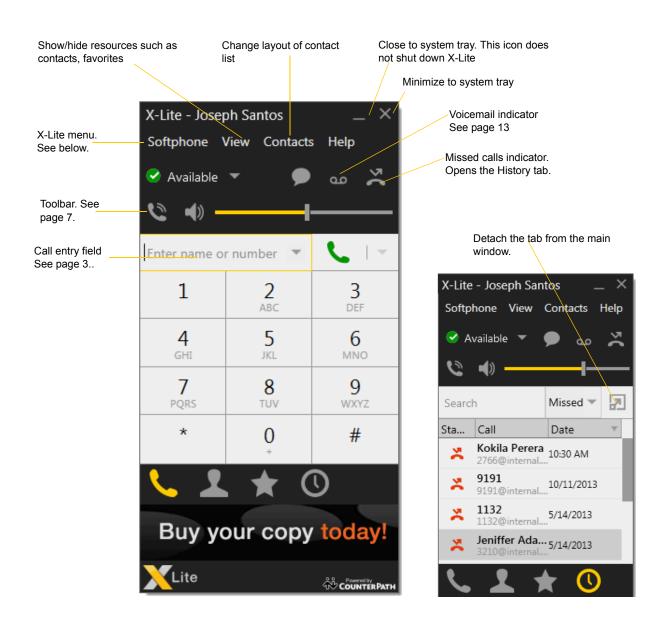
See page 1.

1 Making Phone Calls

1.1 Starting and Quitting X-Lite

If X-Lite is not already running, start it as you would any other program: Use the Windows Start menu or double-click the desktop icon. X-Lite appears. To quit X-Lite, choose Softphone > Exit or press Ctrl-Q.

1.2 The Onscreen Softphone



The X-Lite Menu

Softphone.

- Accounts.
- Preferences. These settings control the way that you work with X-Lite and apply to all accounts. See "Configuring Preferences" on page 10.
- Exit. To shut down X-Lite. You can also exit by pressing Ctrl-Q.

View. Changes how X-Lite looks.

Contacts. Lets you work with contacts.

Help. Provides access to various service-related features.

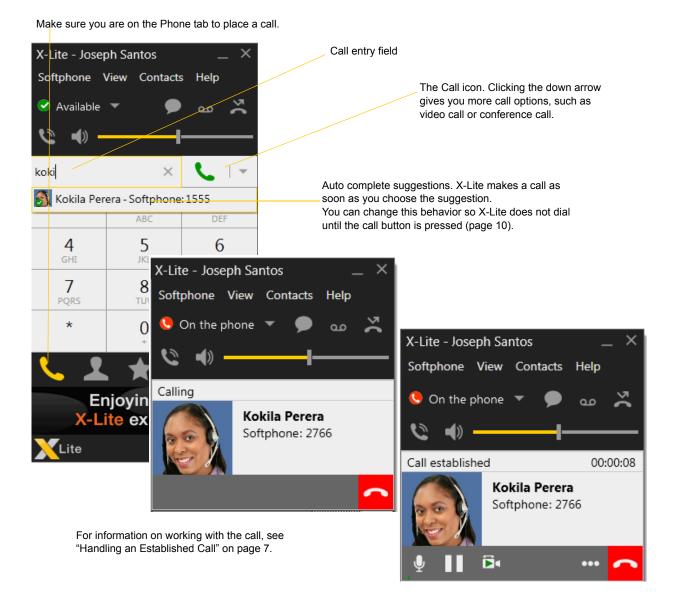
Receiving an Online Status Request

If presence is enabled, then at any time you may get an Online Status Request dialog. For information on this request, see "Sharing Online Status" on page 6.

1.3 Placing a Call

Place the call as described in the table below. The outgoing call opens in its own call panel, below any other existing call panels. You will hear a ringing tone while X-Lite attempts to make a connection.

Option	From the	Description	
Keying	Dialpad or computer keyboard	Enter the phone number in the call entry field using the dialpad or the computer keyboard.	
		If entering a softphone address, you can enter the entire address (6045551212@domainA.com) or just the number (6045551212).	
		As you type, a suggestion for completing the entry may appear. Choose the suggestion by using the Up/Down key and the Tab key or keep typing.	
		2. X-Lite makes a call as soon as you choose the suggestion. If you do not want to choose a suggestion, finish typing and Click the Call button or press Enter.	
Right-click a contact or previous call	Contacts or History tab	Right-click an entry from the Contacts or History tab and choose Call.	
Double-click a contact	Contacts tab	Contacts have a "double-click" action (page 10) that either makes an audio phone call or starts an IM.	
Single-click a contact	Contacts tab	Hover over the right side of the contact to reveal the click-to-call button. Click to place a call using the primary phone number for this contact.	
Double-click a previous call	History tab	Double-click an entry. An audio call is placed.	
Redial	Redial button	 When the call entry field is empty, click the Call button. Or click the arrow in the call entry field and select a recent call. An audio call is placed. 	
Dialing	Dialpad	 If the dialpad is not visible, click the Phone button at the bottom. Click the numbers on the dialpad to enter the phone number. Click the Call button or press Enter. 	
From an instant message	Messages window	Click the menu at the top of the IM window and choose Call.	



Dealing with an Auto Attendant

If you know that your call will be answered by an auto attendant and you know what menu items you will choose, you can include those menu items (DTMF) in the phone number when you dial it:

- Before the first DTMF number, include at least one capital P.
- You can include other Ps. Each P causes X-Lite to wait one second before sending the next character.
- At the end of the input, you must include a; character.

Example: To dial a number, add a 3-second delay and then press 44, enter this in the call entry field:

604551212PPP44;

Example: To dial a number, add a 6-second delay, then press 1 then 3 then 2, each with a two second delay:

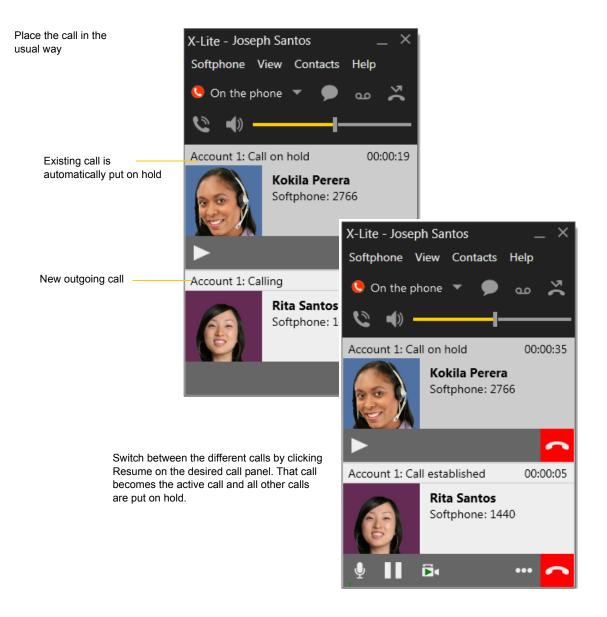
604551212PPPPPPP1PP3PP2;

A capital X or, (comma) can be used instead of P; the following will work in the same way as the first example above.

6045551212XXX44;

Placing another Call

You can place another call. The first call will be put on hold.



1.4 Handling Incoming Calls

X-Lite must be running to answer incoming calls. It can be running in the system tray.(If X-Lite is not running, incoming calls may be directed to voicemail; check with your VoIP service provider.)

The new call appears in its own call panel. In addition, the Call Alert box appears. For information on setting call alert preferences, see page 11.



Click. If you are on another call, that first call is automatically put on hold. You are now talking to the new caller.

This is the alert for an audio-only call

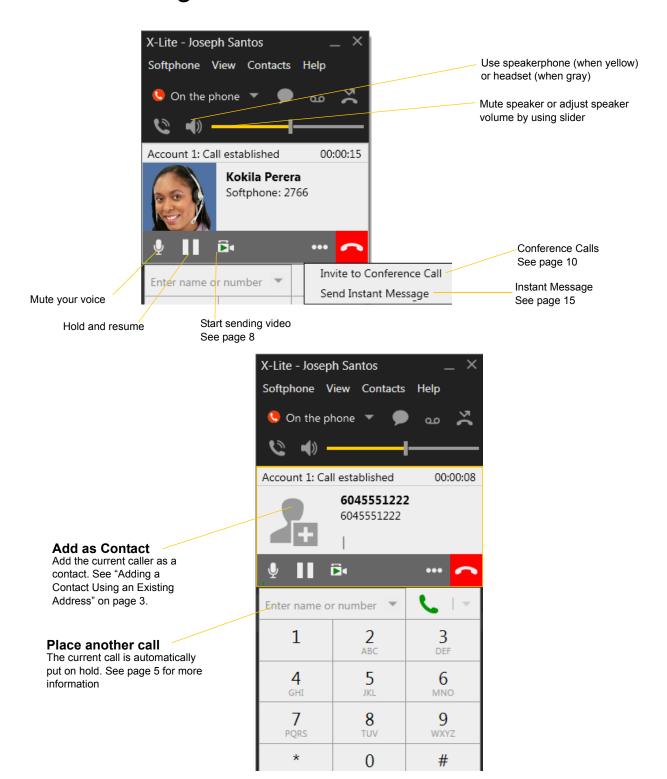


This is the alert for a video call



Click to answer a video call and start sending your video immediately Click to answer without video; if you want (and if you have a camera), you will be able to add video later.

1.5 Handling an Established Call



Ending a Call

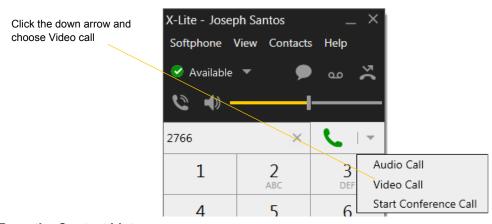
Click the red End call button on the Call panel (the call can be active or on hold). The call panel closes after a few seconds.

1.6 Handling Video Calls

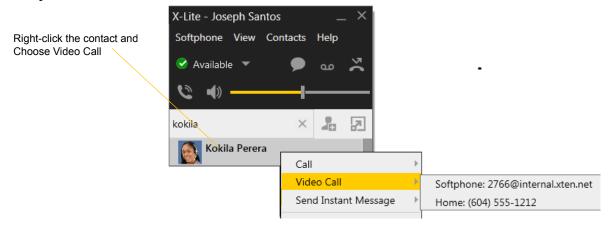
Placing a Video Call

Calls made with X-Lite will work without a video camera, but a video camera is necessary to allow other parties to see your image. X-Lite will work with most USB video cameras.

From the Dashboard



From the Contact List or History



Adding Video

If you have a camera, you can add video to a call that started as an audio call.

Click Start Video () in the call panel. When you add video, the other party may (or may not) start sending their video to you.

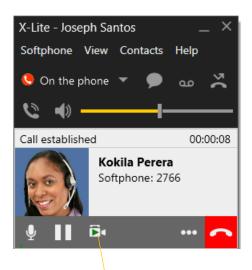
Other Party Adds Video

If the other party starts their video, your video window automatically opens and the video is played. You can start sending your own video, if desired (and assuming you have a camera) by clicking Start Video() in the call panel.

Pausing and Resuming Video

Click Stop Video in the call panel or close the video window to pause sending your video.

Click Start Video to resume sending your video; the video window will open.



Start or Stop sending your video

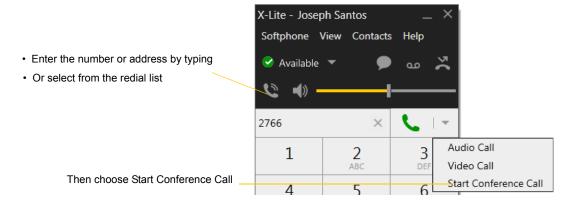
To display in full screen, nover over the video window and click the two-way arrow icon, or press F11 when the focus is on the video window.



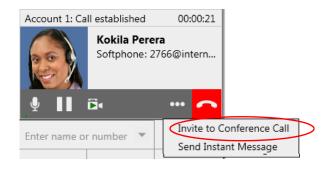
1.7 Conference Calls – Three-way Calls

Starting a Three-way Call

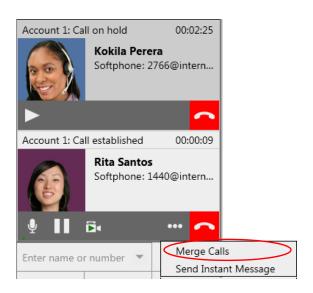
From the Dashboard



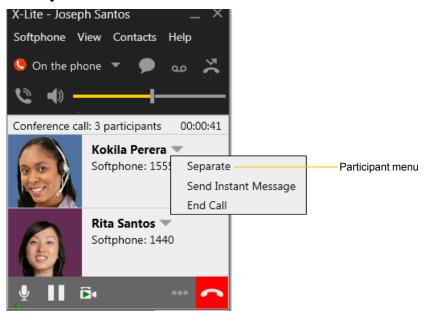
From One Established Call



From Two Established Calls



Managing the Three-way Call



Adding another Participant

If your conference currently has only one participant, you can add the other participant in any of these ways:

- Right-click on a contact or history item and choose Add to Conference Call.
- In the conference call panel, enter a name in the call entry field and click Add.
- Add in a separate call that is not part of the conference call: In the call panel for the individual call, click the down arrow and choose Merge Calls. This call is added to the conference call.

Send an Instant Message

Click the down arrow beside a participant name and choose Send Instant Message.

Removing a Participant

To remove one call from the conference, click the down arrow beside a participant name and choose Separate. The call becomes a separate call.

Ending the Conference

To hang up on everyone, choose End conference from the conference menu.

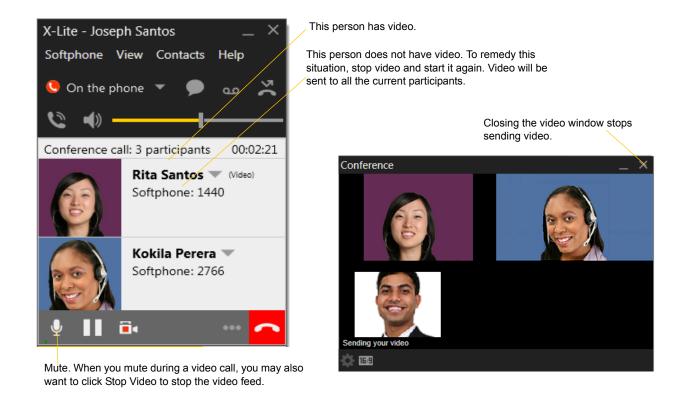
Suspending the Conference

To suspend the conference, choose Hold from the conference menu. All participants are put on hold.

If you need to speak to one participant separately, put the conference on hold, separate the one participant from the conference, take that person off hold. When done, merge the participant back into the call.

Video Conference Calls

Calls made with X-Lite will work without a video camera, but a video camera is necessary to allow other parties to see your image. X-Lite will work with most USB video cameras.



Including Video in a Conference

When you start a conference from established calls, video is automatically included if at least one of the calls already includes video and is sent to all the participants.

When you start a conference from scratch, video is not included. You can open your video window and choose to add video at any time. Video is sent to all the participants.

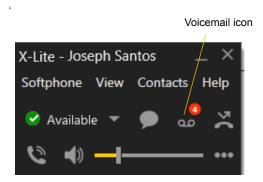
How Video Is Shared

The conference host (the person who starts the conference) serves as the host for other video. Whatever the conference host is receiving will automatically be sent to the other parties.

If the conference host pauses or stops video, other participants will no longer receive video.

1.8 Voicemail

If your service includes voicemail and you have set up voicemail options (page 3), you can click the icon to automatically connect to voicemail and listen to any messages.



2 Other X-Lite Features

2.1 Instant Messaging

Sending an IM

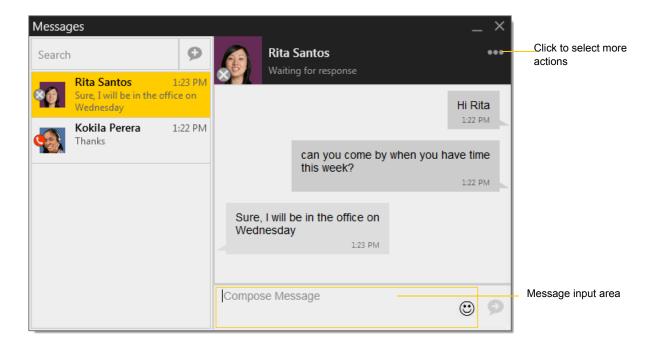
1. You can send an IM to a contact who has a softphone address.

From the Contacts tab	Right-click on the contact and choose Send Instant Message. The contact must have a softphone address. Or click on the IM icon that appears to the right of the contact name.	
An active phone call	If the person is a contact, choose Send Instant Message from the call panel menu.	
An active conference call	If the participant is a contact, choose Send Instant Message from the participant menu.	
From the Messages window	Click the New Conversation icon beside the Search field, and type a number or name.	

2. Type the message. Include emoticons and formatting (Ctrl+B, Ctrl+I, Ctrl+U), as desired.

To insert a return in the message, press Shift+Enter. (You can control the behavior of Enter and of Shift+Enter on the Softphone > Preferences > Application panel.)

3. Click the Send icon.



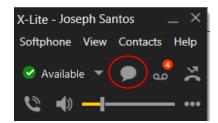
Receiving an IM

When an IM is received, either the IM window or a Call Alert pops up. (To control which window appears, choose Softphone > Preferences > Alerts & Sounds.)

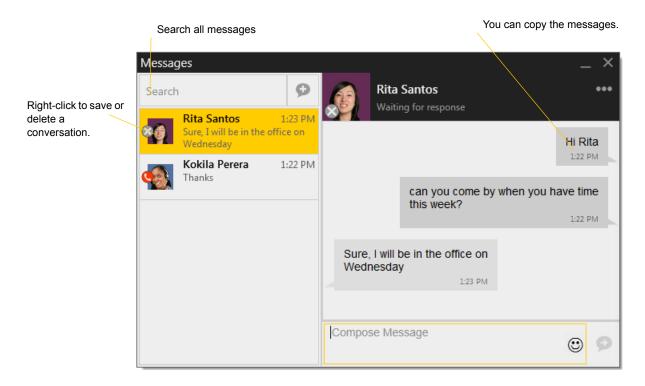
2.2 Viewing Messages

To view your recent IM activity for any contact, perform one of these actions:

• Click the Messages window icon:



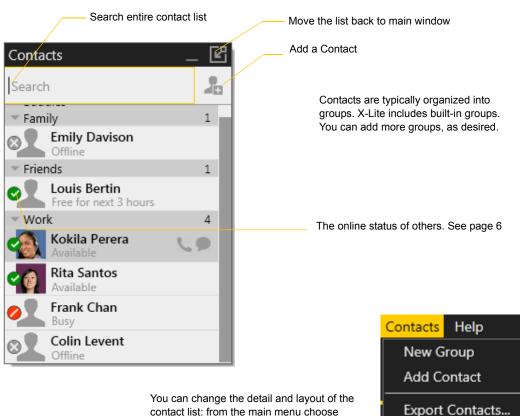
- Click Shift + Ctrl +M.
- On the menu, click View > Messages...



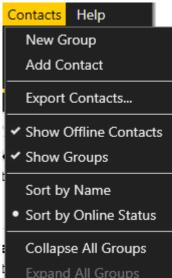
The Contacts Tab

The Contacts tab displays your contacts. Each contact is shown with presence information and icons for singleclick phoning and IMing.

If the Contacts tab is not showing, go to the main menu and choose View > Show Contacts.



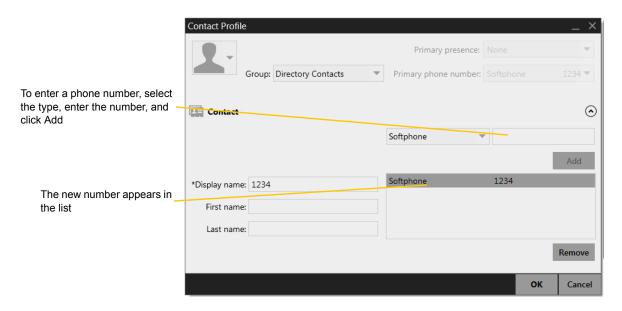
contact list: from the main menu choose Contacts and set the desired options



1.1 Managing Contacts and Groups

Adding a Contact

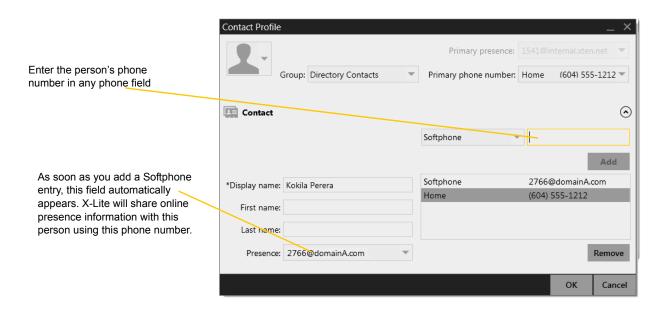
Click ____, or right-click a group and choose Add Contact to Group. The Contact Profile dialog appears.



Field	Description				
Contact Summary					
Display as	If several display names are available, choose the one that you want to show in the contact list.				
Group	Click to show the list of groups. Check each group this contact should belong to.				
Primary presence	This field appears only the contact has more than one Softphone number. The primary presence is used as follows:				
	• The presence icon on the contact list shows the online status for this address.				
	• The single-click and double-click actions for instant messaging use this address.				
	You can still send IMs to this person at their other addresses, but you must right-click and choose from the context menu.				
Primary phone number	If the contact has more than one number, select the primary number. This number will be used with single-click calling and double-click calling.				
Other Sections					
Display name (required)	The display name for this source of information.				
First name, Last name	Optional.				
Contact Methods	Enter as many contact methods as you want.				
	Enter a person's IM address by choosing Softphone as the type.				
Presence	This field is automatically populated when you enter an address in the Softphone field. It indicates that you are sharing online presence information using this address. The address is also shown in list in the Primary presence field, above.				

Example

This example shows how to add a contact when your VoIP service supports online availability via your SIP account



Adding a Contact Using an Existing Address

You can add a contact by capturing existing information:

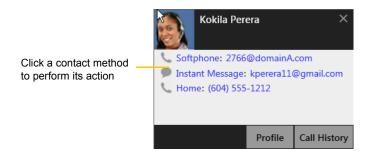
- If you are on a phone call with a non-contact, click the Add to Contacts button in the call panel.
- On the History tab, select an entry that is not a contact. Right-click and choose Add as Contact.

The Contact Profile dialog appears. Complete the dialog as desired and press OK.

If the contact method is Softphone or Jabber, an online status request is sent to this person. See "Sharing Online Status" on page 7.

Viewing Contact Information – the Contact Flyout

Click a contact to show the Contact flyout.



Modifying the Contact List

Changing Contact Information

To change the information for a contact, right-click the contact and choose Edit Profile. The Contact Profile dialog appears (page 2).

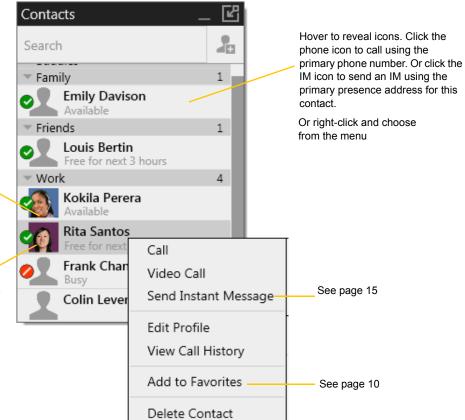
Moving or Deleting a Contact

- To drag one or more contacts to a different group, select them and drag to the title bar of the new group.
- To delete one or more contacts, select them, right-click, and choose Delete Contact or Delete Selected. The contacts are removed from this group. If a contact belongs to several groups, it is removed from all groups.

Adding, Deleting or Renaming Groups

Select any group, right-click, and choose the appropriate menu item.

1.2 Using Contacts



Double-click to phone or IM (depending on how double-clicking is configured in Preferences > Application).

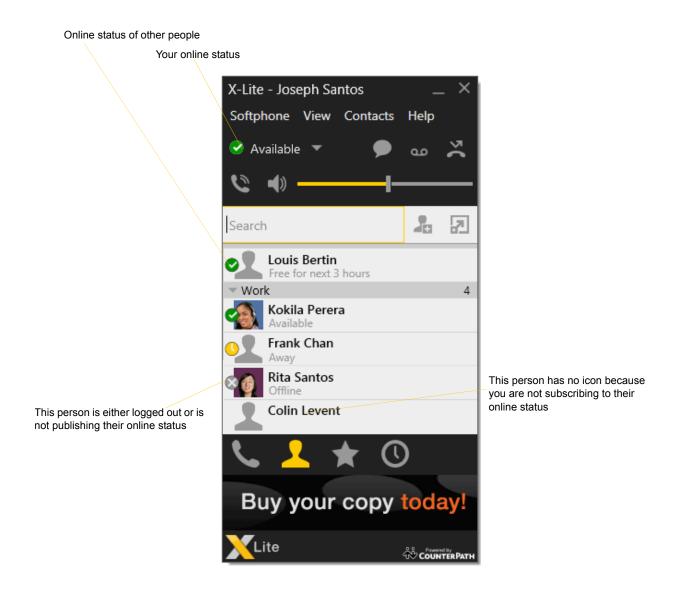
You can watch the contact's online status, if the contact has a softphone or IM address

See the table on page 8 for the meaning of the online status icons.

See "Sharing Online Status" on page 6 for information on obtaining online status information.

1.3 Sharing Online Status

You can publish your online status to contacts who have softphone address, and you can set up X-Lite to view the online status of other contacts. Typical online statuses are available, on the phone, busy, and so on.



Sharing Online Status

Watching Others' Status

If a contact has a SIP address in the Softphone field, X-Lite will automatically obtain status information for this address.

When you choose to share presence information, X-Lite sends the contact a notification request. The request asks that you be able to see that person's status. If the person allows this request, then the icon beside their name (in your Contacts) becomes color coded to specify their status.

Allowing Other Parties to See your Status (Publishing your Status)

Continuing from above, when the other person allows the notification request, your name is added to their contact list. As soon as you are added to their list, a request is sent back to you requesting that they be able to see your status. X-Lite accepts this request automatically, and the other person can now see your status.

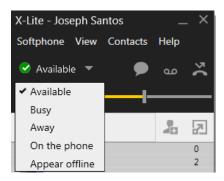
Receiving an Online Status Request

Someone who is not one of your contacts may add you as a contact on their end, and may include your softphone number. In this case, X-Lite receives an online status request.

Setting your Online Status

Changing your Status

Click the down arrow beside the online status indicator on X-Lite, and select the desired online status.



Setting up Status Indicators

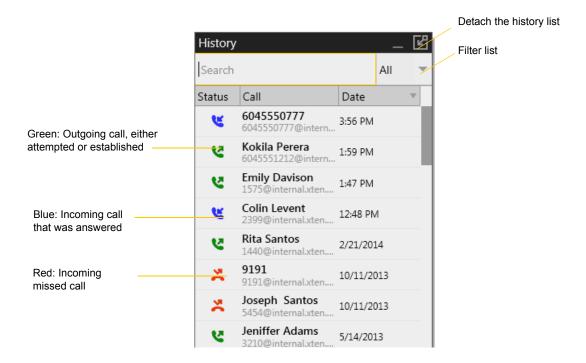
You can create a custom status indicator: click the down arrow beside the status indicator, and double-click on one of the existing indicators; type your custom status.

Status Indicators

Indicator	Meaning for your Status	Meaning for Others' Status
Available	Either: You have set your status to this value.	You can contact this person.
	 X-Lite has determined that you are logged on but not on the phone or idle. 	
	When you have this status, X-Lite will automatically detect when you are idle or on the phone, and change the status to match.	
Busy	You have set your status to this value. X-Lite will never automatically switch you out of this status; you must switch yourself.	You can contact this person.
Away	You have set your status to this value. X-Lite will never automatically switch you out of this status; you must switch yourself.	You can contact this person.
On the phone	 Either: You have set your status to this value. In this case, X-Lite will never automatically switch you out of this status; you must switch yourself. You started a phone call when your status was "Available". When your call finishes, your status reverts to "Available". 	You can contact this person.
Idle	You have not moved or clicked the mouse or pressed a keyboard key for the Idle period. To set the Idle period see Softphone > Preferences > Application. As soon as you click the mouse or keyboard, your status changes to "Available".	You can contact this person.
Appear offline	You have set your status to this value. The other person sees you as offline, even though you are actually online. The other person cannot tell the difference between this status and you really being offline.	The contact is either not logged on or does not want to share online status.
No icon	Not applicable	You are not watching the other person's status.

2 Using Other Resources

2.1 History Tab



Managing the Lists of Calls

You can right-click on an entry in a list to:

- Delete the entry.
- Delete all entries in the list.
- Edit the profile if the entry is a contact.
- Add as contact. The Contact Profile appears (page 2).

Phoning from History

You can:

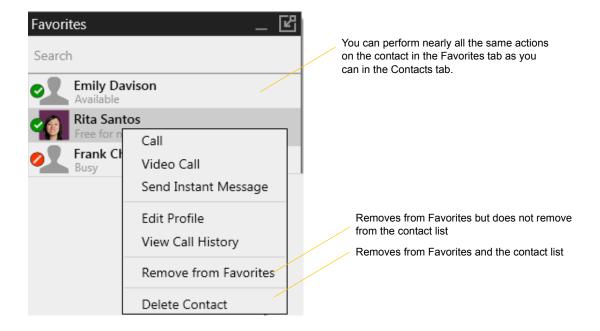
- Right-click on an entry to place a call to this person, using the contact method that was used for this call.
- You can double-click to place an audio call.
- Place a call to this person and add them to a conference call that is in progress. For more information on conference calls, see page 10.

2.2 Favorites Tab

To view the Favorites tab, go to the main menu and choose View > Show Favorites.

You can create favorites from your contact list. They will be displayed in both the Contacts tab and in the Favorites tab.

Select the desired contacts, then right-click and choose Add to Favorites.

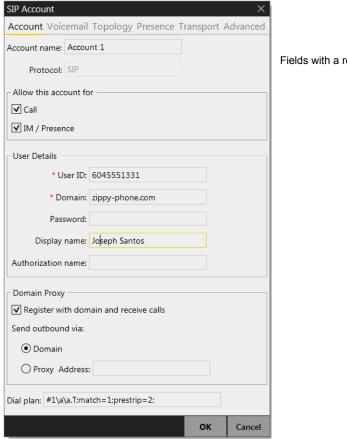


1 Configuring X-Lite

1.1 Configuring Accounts

To create a SIP account, choose Softphone > Account Settings from the menu.

SIP Account Properties - Account



Fields with a red asterisk are required

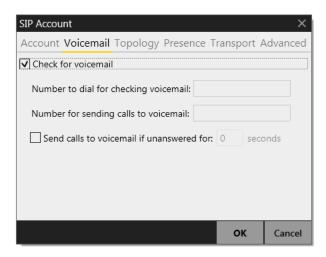
Table 1: SIP Account Properties - Account

Field	Description
Account name	If desired, change the account name to something that is meaningful to you. For example, the name of the VoIP service provider.
Protocol	Read-only. Always specifies SIP.
Use for Call	If checked, this account is eligible to be used for phone calls. If unchecked, this account will never be used for placing phone calls.
Use for IM/Presence	If checked, this account is eligible to be used for IM and online status (presence). If unchecked, this account will never be used for IM and online status.

Table 1: SIP Account Properties – Account

Field	Description
User Details	
User ID	Typically the account number for the softphone account. For example, 6045551212 or 2766. Provided by your VoIP service provider.
Domain	For example, domainA.com. Provided by your VoIP service provider.
Password	Provided by your VoIP service provider.
Display name	This name is displayed in the X-Lite title bar.
	Other people will see you as this name.
Authorization name	May not be required. If it is required, it will be provided by your VoIP service provider.
Domain Proxy	
Register with domain and receive calls	Check this box if you want to register with your VoIP service provider, so that you can receive incoming calls.
	Typically, this field is checked.
	This field must be left unchecked if, for example, your level of service does not include the ability to receive incoming calls. (In that case, turning this field on may cause the account to fail to be enabled).
Send outbound via	Choose the setting specified by your VoIP service provider:
	Domain: If your VoIP service provider requires that traffic be directed to proxies that are discovered via the domain.
	• Proxy: If your VoIP service provider has an outbound proxy address and requires that you provide the address to X-Lite. For the address, enter a domain name (for example, domain.com) or an IP address (for example, 123.456.789.012).
	If you are using X-Lite in a test lab, it is possible that neither of these settings is suitable; see page 9 for a third way to direct traffic.
Dial Plan	Information about the syntax of the numbers used by this VoIP service provider.
	Provided by the service provider. The default plan is:
	#1\a\a.T;match=1;prestrip=2;
	For information on determining whether you need to modify the default dial plan, see page 4.

SIP Account Properties - Voicemail



These settings let you set up to interact with your VoIP service provider's voicemail service.

Your service provider may provide the ability to set up for voicemail outside of X-Lite, for example, by phoning a softphone address and following the voice prompts, or by accessing a website.

Check with your service provider to determine if another setup mechanism is available. If so, check what the settings are in that setup, and make sure you enter compatible information in X-Lite.

Table 2: SIP Account Properties - Voicemail

Field	Description
Check for voicemail	Set the checkbox in one of these ways:
	• Check the box if X-Lite must subscribe to be notified when there is a voicemail for you. In other words, to configure for "subscribe for message waiting".
	• Clear the checkbox if the service provider's voicemail server sends notifications without X-Lite subscribing. In other words, to configure for "implicit subscription".
	Clear the checkbox if the service provider does not support voicemail.
	Check with your VoIP service provider for the correct configuration.
	Voicemail is offered by your VoIP service provider; it is not part of X-Lite. Contact your service provider for information on using voicemail.
Number to dial for checking voicemail	Optional, but complete this field only if your VoIP service includes voicemail.
	• Completing this field activates the voicemail icon on the softphone. When you click this icon, X-Lite will dial this number. You will be connected to your service provider's voicemail and can listen to your messages.
	• If you leave this field empty, then this icon will not work; you will have to manually dial this number in order to connect to voicemail.
	Enter the number provided by your VoIP service provider.
Number for sending calls to voicemail	Complete only if your VoIP service includes voicemail. Optional, but you must complete it if you check "Send calls to voicemail if unanswered".
	This is the number that incoming calls will be forwarded to if they are unanswered after the specified interval (below).
	If you leave this field empty, then X-Lite will never forward calls to your service providers' voicemail. However, most VoIP service providers have their own mechanism for sending unanswered phone calls to voicemail. So leaving this field blank does not mean that forward-to-voicemail does not work.
	Enter the number provided by your VoIP service provider.

Table 2: SIP Account Properties – Voicemail

Field	Description
Send calls to voicemail if unanswered	Complete only if your VoIP service includes voicemail.
	To send to voicemail after the specified number of seconds.
	Your service provider may also provide a similar feature that is set up outside of X-Lite. If so, make sure you do not enter competing information in X-Lite and in the service provider's user interface. For example, if you turn off this field, make sure the same feature at your service provider is also turned off. Otherwise, all your calls will continue to be forwarded.

SIP Account Properties – Topology

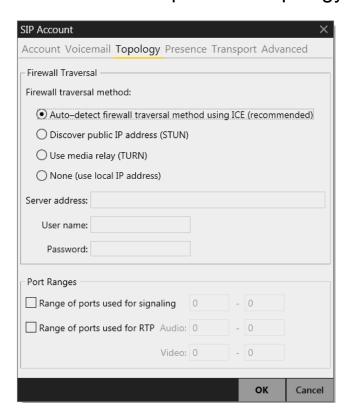
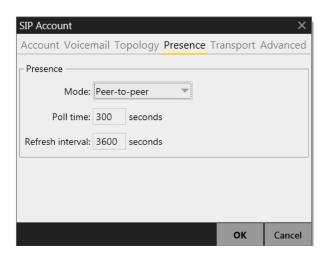


Table 3: SIP Account Properties – Topology

Field	Description
Firewall traversal mode	Choose the setting recommended by your VoIP service provider:
	 Auto detect using ICE: Automatically determine the contact address for signaling traffic.
	Advertise the local IP, public IP (discovered via STUN, if available) and media relay IP and use these to automatically determine the best route for media traffic during calls.
	 Discover public IP address: Advertise the public IP address (discovered via STUN) for the contact address for signaling traffic, and for the connection address for media traffic.
	 Use media relay (TURN): Advertise the public IP address (discovered via STUN) for the contact address for signaling traffic.
	Advertise the address of a media relay server (discovered via TURN) for the connection address for media traffic.
	None: Advertise the local IP address only for both signaling and media traffic.
Server address	Empty: Discover the address of the firewall traversal server (the STUN or TURN server), if available, using DNS SRV.
	• Specified: Use the firewall traversal server specified as either an IP address or a fully qualified hostname.
Range of ports	You can set a range of ports used for SIP signaling, RTP audio and video. The appropriate setting depends on your computer setup:
	 Checked: If your computer is behind a restrictive firewall that only allows specific port ranges to be used. Enter the range of ports to use for your SIP account. (You must also open those ports on your firewall; refer to applicable firewall documentation for information.)
	Unchecked: If your computer is not behind a restrictive firewall.

SIP Account Properties - Presence



Presence allows other softphone users to see your online status and allows you to see the online status of others.

This tab lets you configure how online status is handled for contacts who have a softphone number on your SIP account.

Table 4: SIP Account Properties - Presence

Field	Description
Presence	
Mode	Choose the setting specified by your VoIP service provider:
	Disabled: Presence is not supported.
	Peer-to-peer.
Poll time	Enter the value specified by your VoIP service provider.
Refresh interval	Enter the value specified by your VoIP service provider.

SIP Account Properties – Transport

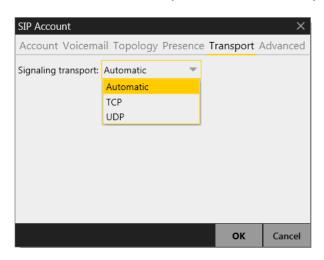


Table 5: SIP Account Properties – Transport

Field	Description
Signaling Transport	Contact your VoIP service provider to identify the types of transport that are supported. Then choose a supported transport:
	 Automatic: X-Lite sets up the transport based on the capabilities of the network and the X-Lite computer. Choose this option if you do not care which transport is used. TCP: This transport provides no signaling security. UDP: This transport provides no signaling security.

SIP Account Properties - Advanced

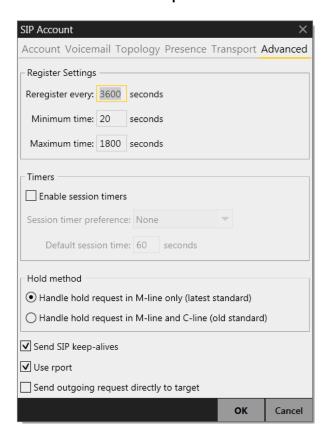


Table 6: SIP Account Properties - Advanced

Field	Description
Register Settings	
Reregister every	The time interval between X-Lite's attempts to reregister in order to refresh the account registration with the VoIP service provider for this account. A value of zero means not to reregister after the initial registration.
	This value is placed in the "Expires" header field of the REGISTER message.
Minimum time	If the reregistration fails, X-Lite will wait this amount of time, then attempt to reregister. If the second attempt fails, X-Lite will wait twice this time and try again, then four times this time, and so on, until reregistration succeeds.
Maximum time	This is the maximum wait time between attempts to reregister. Once this maximum is reached, X-Lite will wait this time for all subsequent attempts.
	For example, the min. time is 20 secs, the maximum time is 120 secs. X-Lite will attempt to reregister as follows:
	• Wait 20 secs.
	Attempt to connect.
	• If fail, wait 40 secs.
	Attempt to connect.
	• If fail, wait 80 secs.
	Attempt to connect.
	• If fail, wait 120 secs (the maximum)
	Attempt to connect.
	• If fail, wait 120 secs, and so on.

Table 6: SIP Account Properties – Advanced

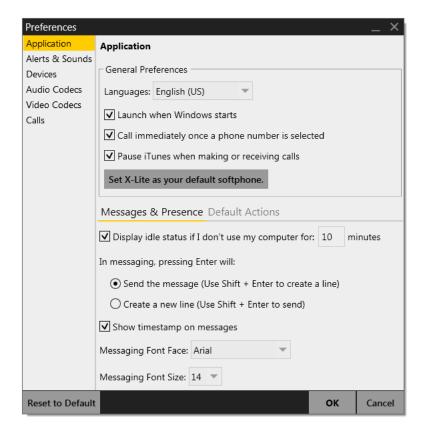
Field	Description
Timers	
Enable session timers Default session time	A session timer is a mechanism to detect whether a call session is still active from the signaling point of view. When the timer expires, a refresh is sent from one party to the other. The timer is then reset.
	• Turn on to enable session timer. Enter a value in Default session time.
	 Turn off to disable session timer; refreshes will never be sent.
Session timer preference	This field specifies your preference for which party should send the refresh. The preference is not a guarantee that the refresh will be performed by the specified party. The choices are:
	None: No preference.
	Local refreshes: Your computer sends.
	Remote refreshes: The other party sends.
	 UAC refreshes: The user agent client (the party that initiated establishment of the communications) sends.
	• UAS refreshes: The user agent server (the other party) sends.
Hold Method	Change this setting only if your VoIP service provider advises you to do so.
Send SIP keep-alives	Typically on, to instruct X-Lite to send SIP keep-alive messages in order to maintain a "pinhole" through your firewall for SIP messaging.
Use rport	Typically on.
Send outgoing request directly to target	When checked, requests with a complete URI (user@ABC.com) go to ABC.com.
	If you check this field, make sure you also set "Send outbound via" (on SIP Account > Account) to "Domain".
	Typically off. This field is intended for test labs and may cause problems in a NAT environment.

1.2 Configuring Preferences

Choose Softphone > Preferences. The Preferences window appears.

The Preferences panels let you control the way that you work with X-Lite.

Preferences – Application

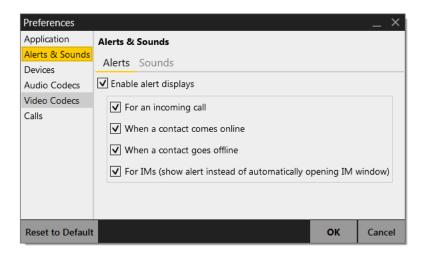


This panel lets you set your preferences for general GUI behavior.

Default Actions

This feature lets you control the action performed for the green Call button at the top of the phone. For example, you can configure the button so that it makes a video call instead of an audio call.

Preferences – Alerts & Sounds

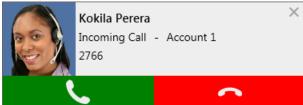


The tabs on this panel let you control the Call Alerts box and lets you assign sounds.

Alerts

You can control whether the Call Alert box is displayed in different situations.

You can also control how you are alerted to an incoming IM: either with a small IM Alert box or with the Messages window itself.



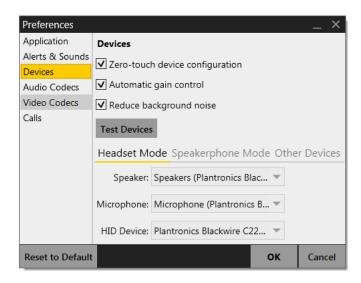
Sounds

You can assign specific sounds to a variety of actions or "events".

- 1. Select the Enable sounds check box and select the check boxes for each desired event, or clear the Enable sounds check box to disable all sounds.
- 2. You can change the sound for each event: select the individual event. The value in Sound preference will change. Select the desired sound.

You can import sounds; these will be added to the list of sounds you can choose from when assigning a sound to an event.

Preferences - Devices



X-Lite automatically detects devices at each startup, and selects the most appropriate device for each purpose. If you do not like this selection, you can override it on this panel.

If you override a selection, it will apply the next time you start X-Lite, unless the device is no longer available, in which case X-Lite will again select the device to use.

Table 7: Preferences - Devices

Field	Description
Zero-touch device configuration	Typically, leave on. When device configuration is on, if you change your audio or video device, X-Lite will automatically detect the new device and start using it.
Automatic gain control	This feature is typically on.
Reduce background noise	Automatically attempts to remove background noise.
	Typically on for the speakerphone.
Test Devices	For information on the Test Devices button, see page 1.
Headset Mode	
Speaker	Change these fields only if you want to override the devices that X-Lite automatically selected.
Microphone	In both these fields, select the headset you are using.
	The headset is the device that is usually used for the speaker (the sound you hear) and microphone (recording your voice). The only situation in which the headset is not used is when the Speaker Phone button on the dialpad is pressed.
	Therefore, unless you will always be using X-Lite in speakerphone mode, you must make a selection here.
	Select the headset in both the Speaker device field and Microphone device field.
HID Device	If the selected headset device is a HID-compliant device, this field specifies that device.
Speakerphone Mode	
Speaker	Same as headset mode, but for the device to use when speakerphone is one (on the toolbar).
Microphone	Select None if you do not have a speaker phone. The Speaker Phone button on the dialpad will be disabled.
	You can set different devices for the speaker and microphone: for example, you can set the speaker to the speakerphone and set the microphone to your headset.
HID Device	Same as headset mode.

Table 7: Preferences - Devices

Field	Description
Reduce echos	Turning this feature on improves sound quality. This feature is typically on.
Other Device	
Ring On	Change this field only if you want to override the devices that X-Lite automatically selected. The device where you want to hear the phone ringing: the headset, the speakerphone, or none.
Camera	This field appears only on versions of X-Lite that include video functionality. Change this field only if you want to override the devices that X-Lite automatically selected. Select the camera model.
Camera Resolution	 Leave at standard, or change the size as follows: Set it to high if you have a good camera and a computer with a fast CPU. You will know that you have set the size too large if: Your computer slows down (the video is using too much CPU) The video shows black areas or is slow or jerky. Typically set it to low only in special situations, for example, when using wi-fi in a hotel. You will know that you have set the size too small if the video is fuzzy.

Preferences - Audio Codecs



This panel shows all the codecs that are included in the retail version of X-Lite. You can enable or disable codecs as desired. With only one codec enabled, all calls made will use that codec. With more than one codec enabled, X-Lite negotiates a common codec with the other party.

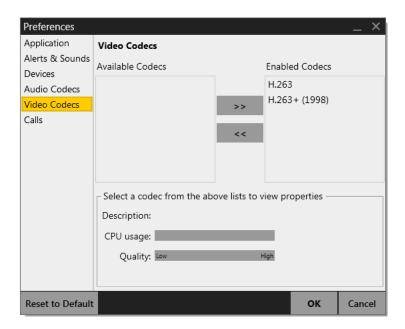
You cannot change the properties of any codecs.

About Codecs

Audio codecs describe the format by which audio streams are compressed for transmission over networks. Codecs can be categorized as either narrowband or wideband:

- Narrowband codecs work with low bandwidth such as a dialup internet connection. These codecs have a sampling rate of 8 kHz.
- Wideband codecs work with high bandwidths and result in better audio quality. However, they do not work with PSTN. These codecs have a sampling rate of 16 kHz.

Preferences - Video Codecs



Video codecs describe the format by which video streams are compressed for transmission over networks. Some codecs require less bandwidth than others, but may result in lower video quality.

You can enable or disable codecs as desired. You may decide to disable a codec even though your VoIP service provider supports it. With only one codec enabled, all calls made will use that particular compression format. With more than one codec enabled, X-Lite negotiates a common codec with the other party.

You cannot change the properties of any codecs.

Preferences - Calls

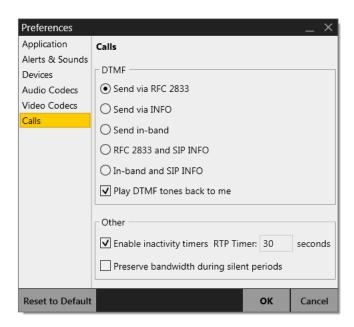


Table 8: Preferences - Calls

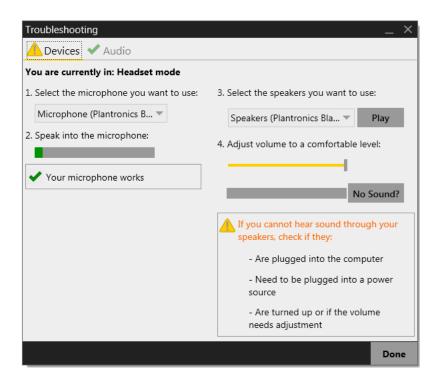
Field	Description
DTMF	You may need to change the DTMF configuration if you cannot interact with interactive voice response systems (auto attendants, voice-activated menus, and so on).
	Contact your VoIP service provider for the correct setting.
RTP	This timer controls how calls are disconnected when X-Lite determines that there is a problem with the call and the other party has probably disappeared (assuming that you have not yourself detected the problem and hung up manually).
	Typically, the timer is enabled. It is recommended that you not disable it.
	You can change the length of the timer, but do not set it to less than 30 seconds.
Preserve bandwidth	When this feature is on, X-Lite stops sending audio when you are not talking.
	When this feature is off, X-Lite always sends audio, which uses more bandwidth but may result in better call quality.
	Typically off. However, if you are using a slow (dial-up or ISDN) connection, you may want to turn it on.

A Troubleshooting

Choose Help > Troubleshooting to display the Troubleshooting window.

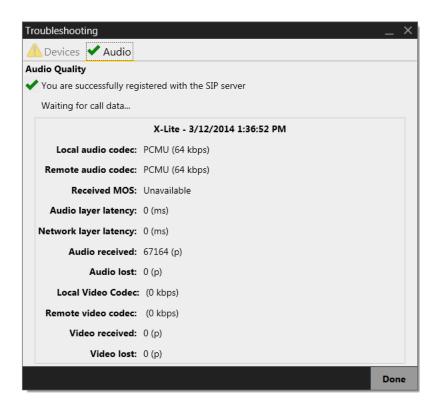
Testing Audio Devices

You can verify that your microphone and speakers are working and can set the volume to a comfortable level without having to actually place a phone call.



Testing Audio Quality

While you are on a phone call, you can test the quality of the audio. Note that to perform a valid test, you should be on an established call (not a call attempt).



B Application Hot Keys

Function	Keyboard Shortcut
Answer an incoming call	Ctrl + N
Decline an incoming call	Ctrl + D
Display the Messages window	Shift + Ctrl + M
Redial the last dialed number	Ctrl + R or Ctrl + R then Enter
End the call End the conference call (hang up on all participants)	Ctrl + E
Mute your voice during a call	Ctrl + M
Hold or resume the call when the focus is on this call panel	Ctrl + H
Turn volume up when the focus is on this call panel	Up key
Turn volume down when the focus is on this call panel	Down key
Display in full screen when the focus is on the video window	F11
Open Preferences window	F8
Open Help in a browser	F1
Quit X-Lite	Ctrl + Q

C Dial Plan

When a call attempt is made, the call input (what you type, select or drag onto the call entry field) can be modified to ensure that the call gets placed successfully. This ability to modify the input relies on the existence of a "dial plan" for the account.

C.1 Dial Plan Syntax

The dial plan has the following syntax:

```
pattern[|pattern];match=1;<transformation>=<value>; [match=2; <transformation>=<value>;]
```

Where:

- Items in [] are optional.
- Pattern: the pattern that will be matched. One or more patterns. Each pattern is separated by a | pipe. The pipe is optional after the last pattern. Each pattern is implicitly numbered, starting from 1.
- Match; Transformation: A pair that identifies the pattern number to compare with the input, and the transformation to perform on the input when a match is obtained. The transformation is optional (meaning that if there is no transformation for a pattern, then the input that matches this pattern is not transformed). One or more pairs.

"match=" is a literal. "n" identifies the pattern. "transformation=" is replaced by a keyword, see below. "value" is replaced by a value.

Spaces are allowed only in the <value> items.

Remember that dial plans are applied after the input has been cleaned up!

Example

\a\a.T|xxxxxxxxx; match=1; prestrip=2; match=2; pre=8;

where:

- \a\a.T is the first pattern.
- xxxxxxxxxx; is the second pattern.
- match=1; prestrip=2; is the first match-transformation pair.
- match=2; pre=8; is the second match-transformation pair.

Pattern

Valid Content

The content for a pattern follows the digit map rules of RFC 2705, supplemented by the rules for regular expressions. Where there is an overlap between the digit map and regular expression rules, the digit map rules apply. For this reason, there are some special cases, included in the table below.

The following table describes the most common elements. All regular expression elements are supported.

Element	Origin	Description	
	Regular expression rules	Pipe character, used to separate patterns.	
0123456789	Literals	Literal digits, used as is.	
# * a to z	Literals	Literal characters, used as is. Special cases: The literal x character is represented by \x. The literal t character is represented by \t.	
x	Digit map rules	Wildcard for any single digit, 0 to 9.	
\a	Regular expression rules	Wildcard for any single alphanumeric character.	
[digit-digit]	Regular expression rules	A digit within the specified range.	
[character- character]	Regular expression rules	A character within the specified range.	
[digit1, digit2, digit3]	Regular expression rules	One of the characters in the collection.	
	Digit map rules	Repeat the last element 0 or more times. For example, xxxx. means repeat the last x 0 or more times, which means this pattern matches three or more digits (not four or more digits)! Use of this element results in a pattern with "minimum requirements".	
T	Digit map rules	A timeout period will take place before automatic dialing starts.	
		The T timer forces X-Lite to wait after a match is made. This timer should always be included in these situations:	
		• Any pattern that uses the . (dot). For example, if the pattern is xxxx. then adding a timer lets you type three or more digits. If there is no timer, then as soon as you type three digits, X-Lite makes the match as soon as you type three digits.	
		• Any dial plan that has two patterns that are similar in elements but different in length. For example, if one pattern is xxx and the other pattern is xxxxxxx, then adding the timer lets you continue typing past three digits, in order to get a match on the second pattern.	
		In this situation, the T timer should be included in the shorter pattern.	

Transformation Keywords

Keyword	Description
prestrip	Strip the first n characters from the input before placing the call.
poststrip	Remove n number of characters from the end of the input before placing the call.
pre	Add the specified account prefix to the input before placing the call.
post	Attach the specified postfix to the input before placing the call.
replace	Replaces the input with the specified string before placing the call.

Order of Transformations

These transformations are always performed in the following order (the order in which the transformations are entered in the dial plan is not significant):

prestrip > poststrip > pre > post > replace

C.2 How the Input Is Processed

Comparing Input to the Dial Plan Patterns

The input is compared to the dial plan. Keep in mind that the input being compared is different depending on whether the input is dragged/selected or typed:

- If the input is dragged or selected, then the entire input is compared to the dial plan.
- If you are typing the input, then the digits are compared one by one as they are entered. Each time a new digit is entered, the comparison starts over.

Results of the Comparison

X-Lite finds a match according to the following rules.

Type of Match	Result If User Presses Enter or Call	Result if User Stops typing
The input matches the pattern and the pattern does not include the T timer	The transformation is performed. X-Lite attempts the call.	Nothing happens even after the T timer has expired.
The input matches the pattern and the pattern includes the T timer	The transformation is performed. X-Lite attempts the call.	The transformation is performed. X-Lite attempts the call.
The input does not match the pattern	No transformation is performed. X-Lite attempts the call.	Nothing happens even after the T timer has expired.

C.3 Examples

Example 1

```
\a\a.T|xxxxxxx.T;match=2;pre="9"
```

This simple example shows how to differentiate between a PSTN number and a softphone address, and how to add a "9" dialing prefix only to the PSTN number.

Example 2

```
3xxT|1xxxxxxxxxx|[2-9]xxxxxxxxxx|+x.T;match=2;pre="9";
match=3;pre="91";match=4;prestrip=1;pre="9011"
```

ЗххТ	The first pattern is any three-digit number beginning with 3. No transformation. The assumption is that this is an internal extension. The timer forces X-Lite to wait after detecting a three-digit number beginning with 3, in case you are actually dialing a local call starting with 3.
1xxxxxxxxx	The second pattern is any eleven-digit number beginning with 1. Prefix with 9 and dial as is. The assumption is that this is a long-distance PSTN call within North America (within North America, all long-distance calls start with 1).

[2-9] xxxxxxxx	The third pattern is any ten-digit number beginning with a number other than 1. The assumption is that this is a local PSTN call within a ten-digit dialing zone.
+x.T;	The fourth pattern is a number of any length that begins with +, to indicate an international PSTN call from North America. Delete the +, prefix with 9011 (011 is the number to access an international line from North America).
match=2;pre="9";	For the second pattern, prefix 9 to access an outside line.
match=3;pre="91";	For the third pattern, prefix 9 and 1 to access an outside line and enter the long-distance code.
<pre>match=4;prestrip=1; pre="9011"</pre>	For the fourth pattern, remove the + and prefix 9011 to access an outside line and enter the international code.

D Exporting Contacts

You can export your contacts to a CSV, vCard or PST file.

Exporting contacts to a file is particularly useful when you upgrade to X-Lite *for Windows* or X-Lite *for Mac*, because you can then import this file into your new softphone and instantly populate the new contact list.

- 1. From the main menu choose Contacts > Export Contacts. The Export Contacts wizard starts.
- 2. When you click Next, the export starts. The result is:
 - For a PST export, the existing .pst file is updated to include the entries from the X-Lite contact list. If Outlook is open, the entries immediately appear in the Outlook contacts.
 - All information in the X-Lite contact list is exported to Microsoft Outlook. Only information that can be displayed in Outlook actually appears in the Outlook Contacts window. Typically this means that all softphone addresses are exported (and stored in custom fields) but not displayed in Outlook.
 - For other formats, a new file of the specified type is created.

E Other Ways to Run X-Lite

E.1 From a Hyperlink

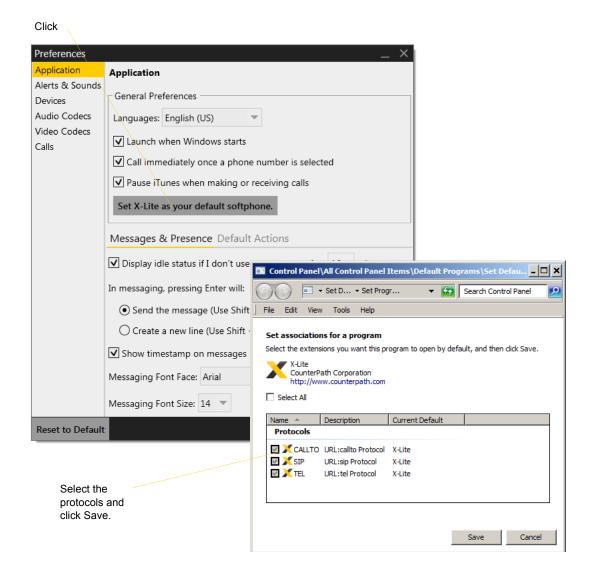
You can attach a hyperlink to a phone number or softphone address that, when clicked, starts X-Lite and dials the number. Attach a hyperlink with this format:

```
<a href="sip:address or number">dial address or number</a>
```

For example:

```
<a href="sip:kperera@domainA.com">dial kperera@domainA.com</a>
```

X-Lite supports three protocols: sip, tel, and callto. For X-Lite to start dialing when a user clicks such links, the user must configure X-Lite as their default phone via X-Lite's Preferences, and then associate the protocols to X-Lite.



E.2 From the Command Line

You can start X-Lite from a DOS prompt. You may need to add the install directory (typically C:\Program Files (x86)\CounterPath\X-Lite) to the PATH. Then type:

```
xlite.exe
```

You can also run these action commands:

```
>xlite.exe -action=<action>=<input>
```

where action and input are:

call?to the remote URI im?to the remote URI add?contact the contact URI

quit

For example:

```
C:\>xlite.exe -action=call?to=1331
```

or

C:\>xlite.exe -action=call?to=1331@zippy-phone.com

F Glossary

Broad or wide bandwidth. In data transmission, the wider the band, the more data it is

possible to transmit in a given time span. A cable, DSL and ADSL connection to the network provide broadband for data transmission. A dialup or ISDN connection

typically provide a narrow bandwidth for data transmission.

Codec Codecs are programs in X-Lite involved in transmitting audio; each codec has

different characteristics and therefore each works better in some situations than in

others

Dial plan The rules that X-Lite follows in order to interpret the softphone address or phone

number that the user has entered and to modify the number or address, as required, to

ensure that the call will be placed successfully.

DTMF Dual-tone multi frequency. DTMF is the system that is used in interactive voice-

response menu systems such as the menu system for accessing voicemail messages. The DTMF system allows the user to interact with the menu by pressing keys on a

dialpad or keyboard.

Firewall A technology that prevents unauthorized people connecting to your computer and to

the applications running on the computer.

HID Human interface device. In X-Lite, if the headset is HID-compliant, the user can

configure the buttons on the device to invoke functions on X-Lite such as answering

an incoming call.

IM Instant Messaging. A technology that lets users send text message and files for near

instantaneous delivery and display on each others' computers.

MWI Message Waiting Indicator. An indicator that there is a voicemail message for the

owner of an account.

Narrowband In data transmission, the wider the band, the more data it is possible to transmit in a

given time span. A cable, DSL and ADSL connection to the network provide broadband for data transmission. A dialup or ISDN connection typically provide a

narrow bandwidth for data transmission.

Presence An instant messaging feature that allows users to share information about their online

status.

PSTN Public Switch Telephone Network. The traditional land-line phone network.

SIP account An account that provides the user the ability to make VoIP phone calls. The account

encapsulates the rules and functions the user can access.

Softphone address The address used to connect to a SIP endpoint. In other words, the "phone number"

used in a VoIP phone call. For example, sip:joseph@domainA.com.

USB device Universal Serial Bus device. A device that follows a specific communications

standard. A headset may be a "USB type" of headset.

VoIP Voice over Internet Protocol. A variation of IP used for sending voice data over the

Internet, in other words, used for making phone calls over the Internet.

VoIP service provider A business that provides a VoIP service, allowing a user to connect to the Internet in

order to make VoIP phone calls using X-Lite. The VoIP service provider sets up a SIP

account for the user.