IP-Sound Documentation Version Thu, Oct 4, 07

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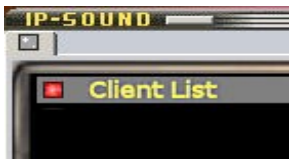
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Internet Usage

Use a VPN (Virtual Private Network) to encapsulate network data if IP-Sound is to be used over Internet. There are free or limited VPN software like OpenVpn or Hamachi.

To get an Internet connection to work without the use of a VPN it's essential to enable routers and firewalls in the connection chain to use and allow UDP port forwarding. The default port is 4444 but that can be changed in Properties.

Menus

<table>
<tr><td colspan="2">Right click the mouse outside of the client list to show the Main menu.
Right click the mouse on a client entry in the list to show the Client menu.</td><td>
</td></tr>
<tr><td>About...</td><td></td><td>Shows the license</td></tr>
<tr><td>Client</td><td>Add</td><td>Add a new entry in the client list. For DNS ip address look up, enter an Internet host name and press “DNS Query button”.</td></tr>
<tr><td></td><td>Edit</td><td>Edit client information.</td></tr>
<tr><td></td><td>Remove</td><td>Remove client.</td></tr>
<tr><td></td><td>Import</td><td>Import client list file from a previously exported client list file.</td></tr>
<tr><td></td><td>Export</td><td>Export client list to a file.</td></tr>
</table>

	Connect	Connect to client.
	Connect with DNS resolve	Ip address DNS lookup connect to a client using the host name.
	Disconnect	End a connection.
	Scope	Shows the audio scope.
Tools	Properties	Shows the properties dialog
	View Log File	Shows the log file with system default text viewer.
	System Key	Read the **Keyboard shortcut's** section.
Minimize to tray		Minimize to tray.
Quit		Terminate.

Properties

Network	ip address	Shows the interface ip address
	port UDP	The UDP port to use for communication between clients.
	Your handle	An identifier of this client to other clients.
	Connect to this client at start	Selects a client from the client list to automatically connect with when IP-Sound is started. Select “Use DNS to resolve ip address” if a DNS is to be used to find out the correct ip address at the connection moment.
Sound	“Microphone” icon	The sound card used for audio input. If possible select other then “system”. Select “ Line level control instead of microphone” if desired.
	“Speaker” icon	The sound card used for audio output. If possible select other then “system”.
	Test Sound	The audio feed to the input sound card (mic/line) should be heard at the output sound card (speaker).
	Sound codec	Choose which compression/raw format to transfer audio in.
	Buffer tune	If one experience lot of “ticks” or very short breaks in the audio it might help to

		experiment with this value. In most cases this is not needed.
Options	Scope Zoom	Magnifies Scope.
	Start in tray	Start IP-Sound in tray mode.
	Disable connection ringer	Disables the ringer audio signal when a client wants to connect.
	Use connection log	Enables a log file to keep track of connection events. The text file is created in the same directory as IP-Sound.exe.
	External ringer *.Wav file	Select a sound file (*,wav) to played as a ringer for incoming connections. The sound loops until the connection is accepted or aborted. If no file is selected the internal ringer is used.
	Auto start application	Launch another application together with IP-Sound.
Access	Auto answer	Will always answer a connection
	Restrict Auto answer to client list ip numbers	Only clients in the client list are allowed to connect.
	Rejects client that uses another codec.	Silently disconnects clients that attempt to use another codec.
	Use this password when connecting	Password to be used on each side of a connection.
Filters	Use bandpass	Enable the bandpass filter. **Freq:** The centre frequency of the bandpass filter in Hertz. Range is about 300Hz to half the sampling frequency. Sampling frequency is twice the codec frequency choosen. **Gain:** The gain of the bandpass filter at the centre frequency. Range is about -15dB to +15dB. **Q:** The Q-Factor (or steepness) of the bandpass filter. The smaller the value, the steeper the filter (and the more unstable the filter). Practical values range from about 1 to about 0.01. For practical reasons this is converted to a range of 1 - 100. **Scale factor:** Change the scale factor of the Q value **Cascades:** Several filters in a chain.

	Input Limiter	Use limiter on local audio input.

Graphic Symbols

Connection status



Trying to connect to remote

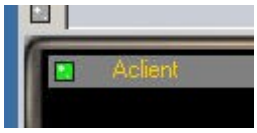


Connected

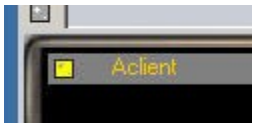


Disconnecting

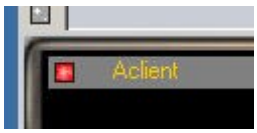
Client status



Remote is on-line and reachable



Remote is busy with a connection



Remote is off-line or unreachable

Lamp Indicators



Lights up if System Key is activated



Lights up when a codec is initiated

Keyboard Shortcut's

Key	**Action**
<Ctrl + m>	Main Menu
<Ctrl + p>	Properties Dialogue
<Insert>	Add client
<Ctrl + e>	Edit client
<Delete>	Remove client
<F9>	Connect
<F8>	Disconnect
<F2>	About...
<Escape>	Minimize
<Ctrl + q>	Quit
<Ctrl + l>	Shows the log file with system default text viewer.
<PageUp>	Next page, cycles client list & connect display.
<PageDown>	Previous page, cycles client list & connect display.
<Space>	Mute microphone.
<Ctrl + s >	Mute speaker.
<Numeric Pad + >	Increase speaker (wave) volume.
<Numeric Pad - >	Decrease speaker (wave) volume.
<Ctrl + 'Numeric Pad +' >	Increase microphone volume.
<Ctrl + 'Numeric Pad -' >	Decrease microphone volume.
<System Key>	Activate with <F5> or from Tools menu. This function enables low level system monitoring of the <Right Control> key. This will mute the Microphone. This works regardless of whether activated/focused application is IP-Sound or not.
<Escape>	Closes Dialogs, equal to Cancel/Abort.
Any other button or item is reachable with <Tab>, <Shift-+ Tab>, <Enter> etc using Windows standard behavior.	

External Command Control

Use PostMessage() to send control commands to IP-Sound from other applications.

Syntax: PostMessage(handle, WM_APP + 1, <Message>, <Command>);

C code example:

HWND h = FindWindow("TDlg","IP-Sound");

// Connect to client

ATOM msg = GlobalAddAtom("192.168.0.100");

PostMessage(h, WM_APP + 1, (WPARAM)msg, 2);

Description	**Message**	**Command**
Test routine. If this message is received by IP-Sound an Info box will be shown with Message and Command.	*any message*	1
Connect to a client with a ip-number.	Ip number	2
Disconnect a client	*empty*	3
Terminate/Exit IP-Sound	*empty*	4
Sets a new udp port. To use the new port IP-Sound must be restarted (Use Terminate).	Udp port	5
Sets codec to be used.	Codec number, see below	6
	9050 = 8k,GSM,16bit,1ch 9051 = 8k,PCM,16bit,1ch 9052 = 8k,PCM,16bit,2ch 9053 =16k,PCM,16bit,1ch 9054 = 16k,PCM,16bit,2ch 9055 = 22k,PCM,16bit,1ch 9056 = 22k,PCM,16bit,2ch 9057 = 44k,PCM,16bit,2ch	9058 = 8k,Speex,16bit,1ch 9059 = 16k,Speex,16bit,1ch 9060 = 16k,Speex,16bit,2ch 9061 = 32k,Speex,16bit,1ch 9062 = 32k,Speex,16bit,2ch 9063 = 11025Hz,PCM,16bit,1ch

9064	= 8kHz,G711,16bit,1ch

- End -

Download

IPS-v0.57a-Finale.zip