VINGTOR STENTOFON
by ZENITEL GROUP

VS-Client User Manual

Vingtor-Stentofon Intercom Client

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1 Basic Information

1.1 Document Scope

This document describes the installation, configuration and operation of the VS-Client - a Vingtor-Stentofon intercom client for the PC.

1.2 Products

Item Number	Item Name
1009661101	1 x Pulse-Server-VS-Client Extensions
1009661106	6 x Pulse-Server-VS-Client Extensions
1009800140	USB Button for VS-Client

1.3 Publication Log

Revision	Date	Author	Status
1.0	9.11.2015	EE/HKL	Published
1.2	9.5.2016	EE/HKL	VS-Client 1.2.3.1

1.4 Related Documentation

Doc. no.	Documentation
A100K11194	Turbine IP Intercoms Technical Manual
A100K11619	VS-IMT Technical Manual

1.5 Terminology

Acronyms	Explanation
VS-IMT	Vingtor-Stentofon Intercom Manager Tool
GUI	Graphical User Interface
LAN	Local Area Network

Definitions

Term	Definition
Pulse	Vingtor-Stentofon Pulse system allows for as few as two stations and is scalable according to your needs. Based on Zenitel's IP technology, Vingtor-Stentofon Pulse offers High Definition voice quality, simple installation and ease of use.

2 VS-Client Installation

2.1 Prerequisites

Recommended system requirements	
Operating system	Windows 7 x86/64, Windows 8 x86/64
Hardware	CPU: Dual Core Intel Core or newer RAM: 4 GB Hard drive: 40 GB or better Modern integrated GPU with OpenGL 3.0 support Network card
Audio	Modern soundcard Speakers and microphone
USB button (optional)	USB 2.0 support

2.2 Installation Procedure

The VS-Client application includes a Windows Installer package named **VingtorStentofonIntercom_1.2.3.1.msi** that is used to install VS-Client on the PC. The installer has a Setup Wizard that will guide the user through the installation procedure.

To install VS-Client:

- Double-Click **VingtorStentofonIntercom_1.2.3.1**

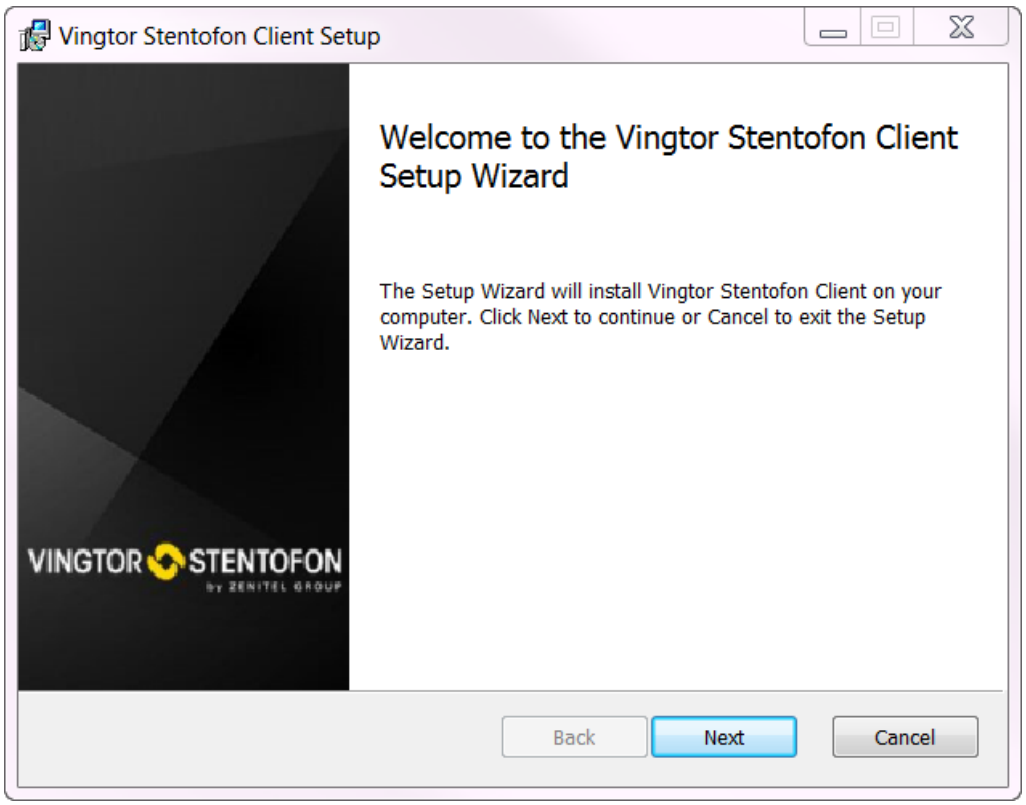


Figure 1 VS-Client Installation Wizard

- Click **Next**

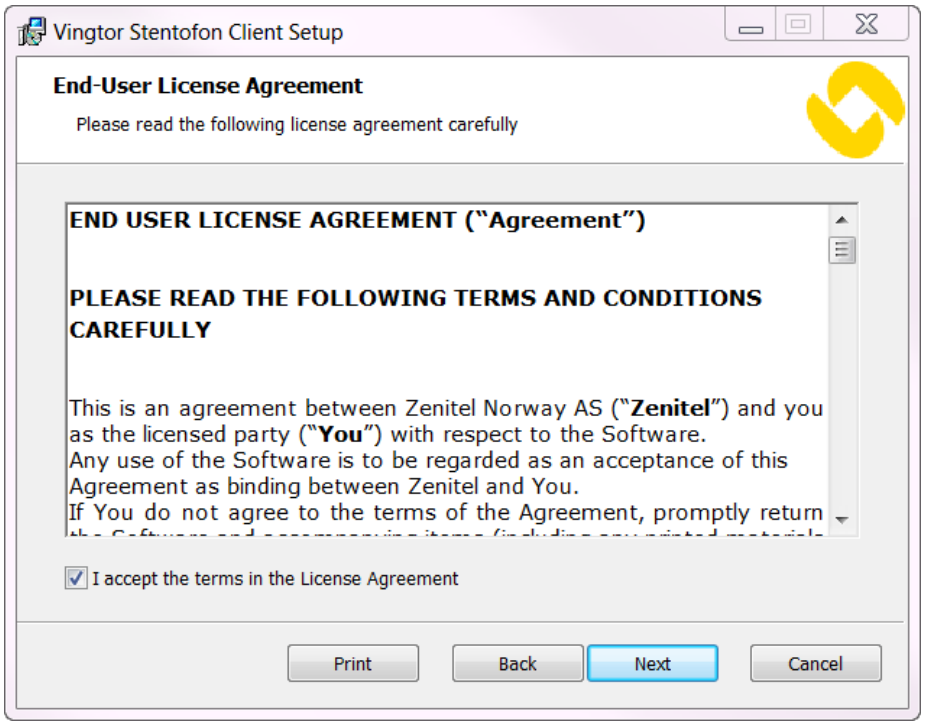


Figure 2 EULA

- Check the **Accept EULA box** and click **Next**

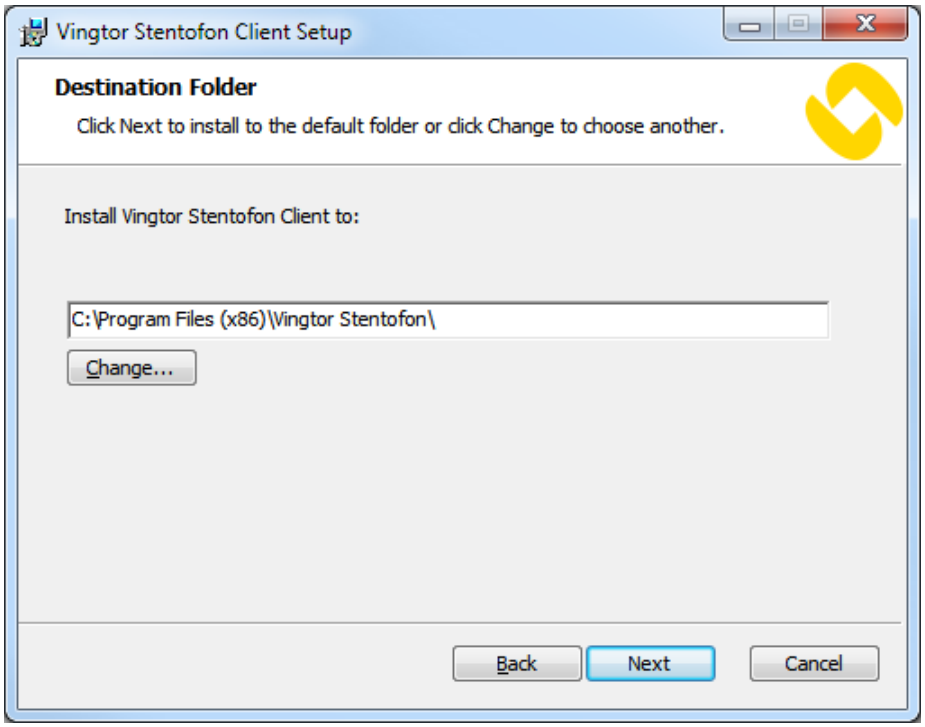


Figure 3 VS-Client Destination Folder

- Click **Next**

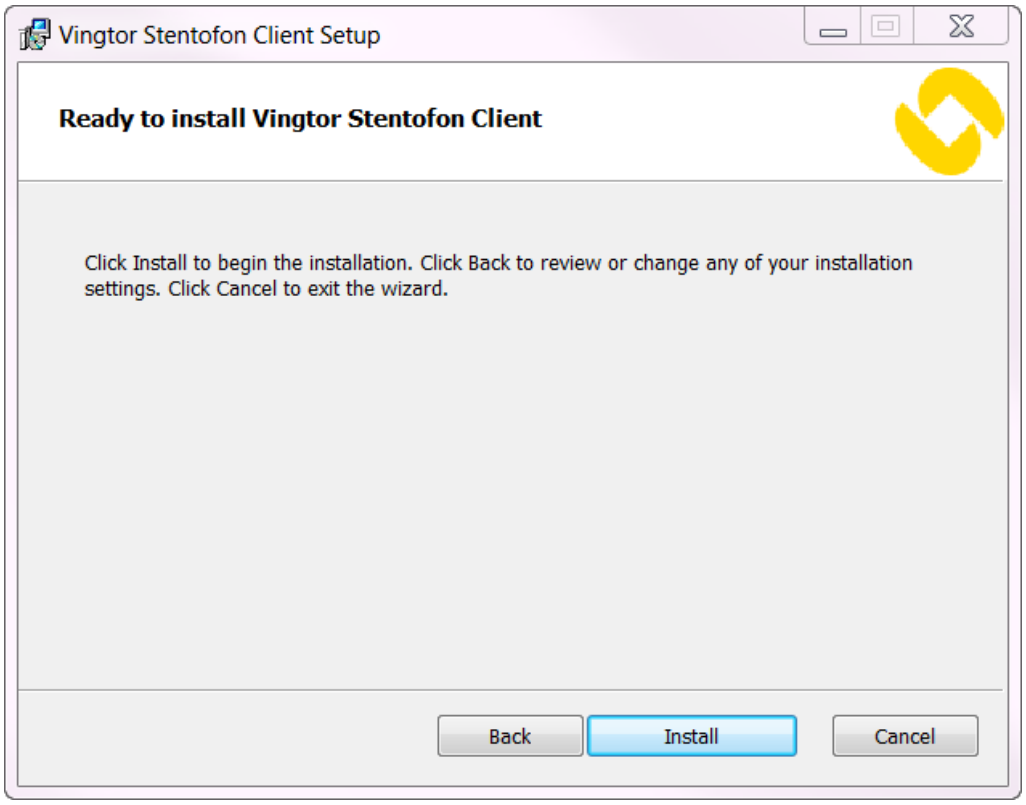


Figure 4 VS-Client Installation Start

- Click **Install**

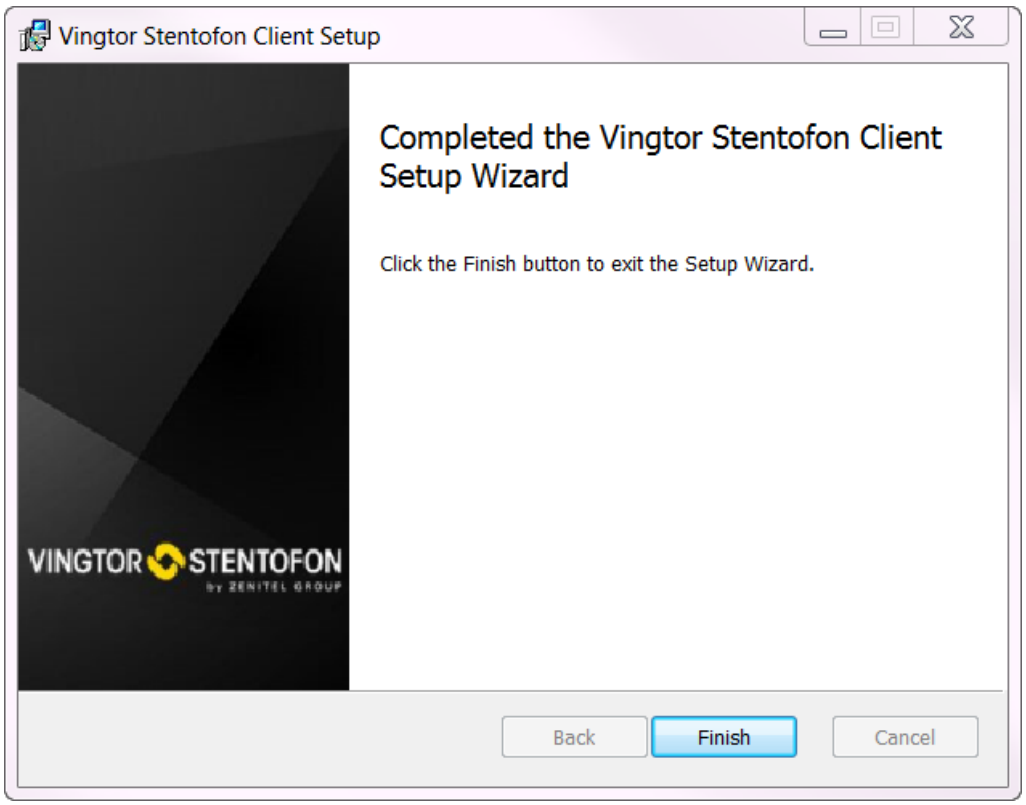


Figure 5 VS-Client Finish Installation

- Click **Finish** to complete the installation

Once installed, the VS-Client application will be available in the **Start Menu**:

All Programs > **Vingtor Stentofon** > **VS-Client**

The application data is stored under the folder:

C:\ProgramData\Vingtor Stentofon\EdgeAudioClient

In addition, two supporting services are installed:

Vingtor Stentofon ZAP Service	ZAP (Zenitel Application Protocol) - Configuration and Event Hub. Needs to be manually started. Should only be used with VS-SDK for Pulse.
Vingtor Stentofon Intercom Service	Intercom (VoIP) Signaling and Audio Processing Module. Disabled by default. Should only be used with VS-SDK for Pulse.

VS-Client can be removed by running from the **Start Menu**:

All Programs > **Vingtor Stentofon** > **Uninstall VS-Client**

3 Getting Started

3.1 Overview

VS-Client is a Vingtor-Stentofon intercom client that runs on Windows. It is designed to be used as an operator's intercom or office intercom. Target users include: site security or control-room operator, payment booth operator (parking and toll-roads), operator handling incoming calls, and in-office standard calls. It features Turbine intercom quality audio with echo cancellation and noise reduction. VS-Client works with the Vingtor-Stentofon Pulse system.

3.2 Main Features

VS-Client includes these main features:

- **Support for Vingtor-Stentofon Pulse**
  VS-Client works as a Pulse intercom device.
- **Turbine-class Audio**
  Includes acoustic echo cancellation and noise reduction, volume control and audio device selection.
- **Lite & Full mode**
  Lite mode is a non-intrusive simple interface that can be easily integrated into existing systems. Full mode provides full keypad and additional call panels like call history and contacts.
- **Full numeric keypad**
  Provides full call control with call transfer, hold/resume, mute.
- **Call history**
  Shows a list of all incoming and outgoing calls.
- **Address Book (Contacts)**
  Contacts can be created and added into a contacts list. Contacts can also be imported or exported.
- **Favorites**
  A contact can be marked as Favorite for use as speed dials. This also works with PC keyboard shortcuts.
- **Function keys**
  Special function keys available during call (e.g. send DTMF – open/close door)
- **Call control with USB button**
  Calls can be initiated or accepted with an optional USB button. It also provides basic call control like Push-To-Talk / Duplex conversation mode switching.
- **Multiple language support**
  English is the default language for the user interface, while other languages are also available.

3.3 Starting VS-Client

Click the VS-Client program in the Start menu to start it and the VS-Client icon will appear in the Windows system tray. When the application window is minimized to the system tray, any of the following actions can bring it back to the foreground:

- **Double-click the VS-Client icon**
- **Right-click the VS-Client icon** and from the context menu select **Show**
- Use the keyboard shortcut defined in **Settings** > **Keyboard** > **Show Client**
    - See section 3.5.4

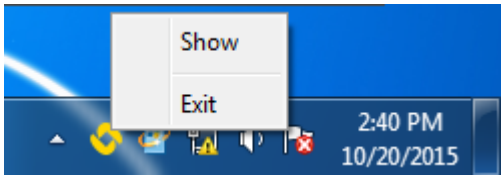


Figure 6 VS-Client in Windows System Tray

3.4 Main User Interface

VS-Client can be used in Lite mode or Full mode with keypad and additional call panels.

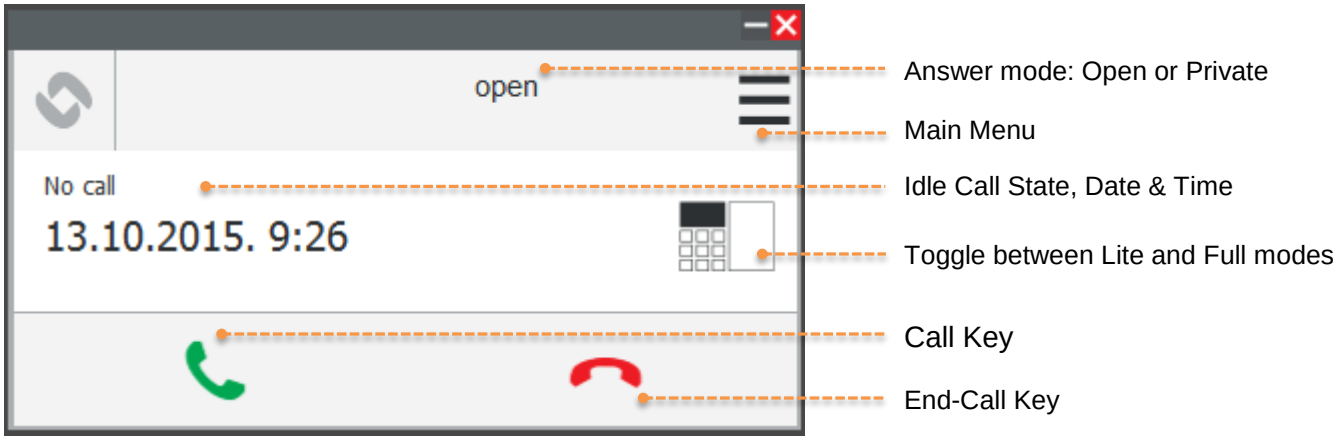


Figure 7 Lite mode in idle call state

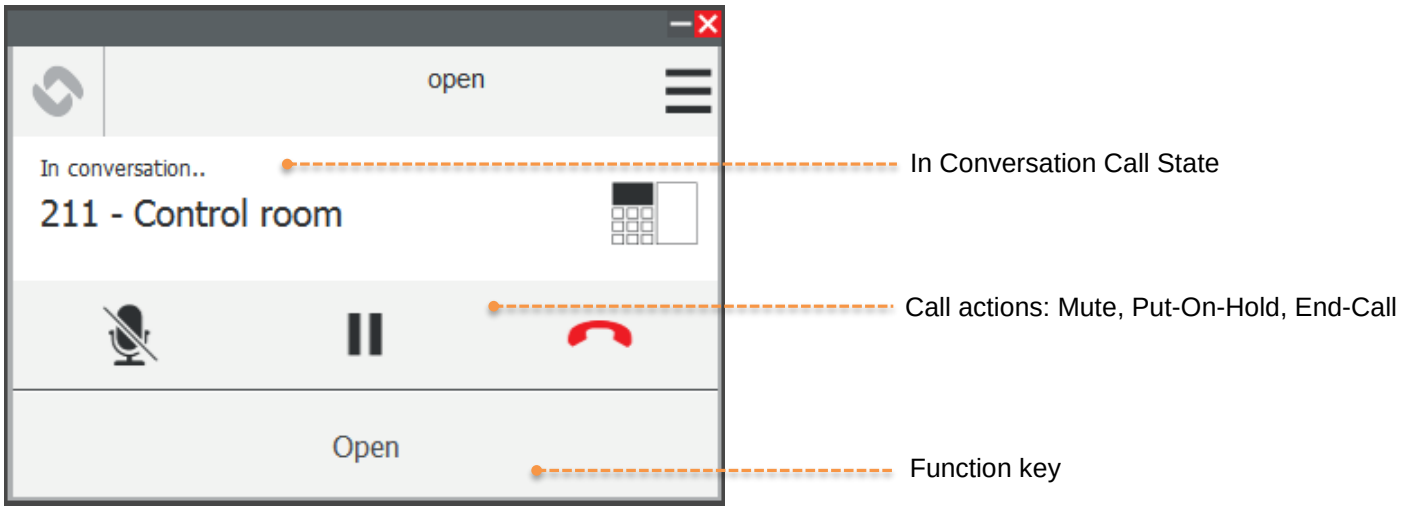


Figure 8 Lite mode in conversation call state

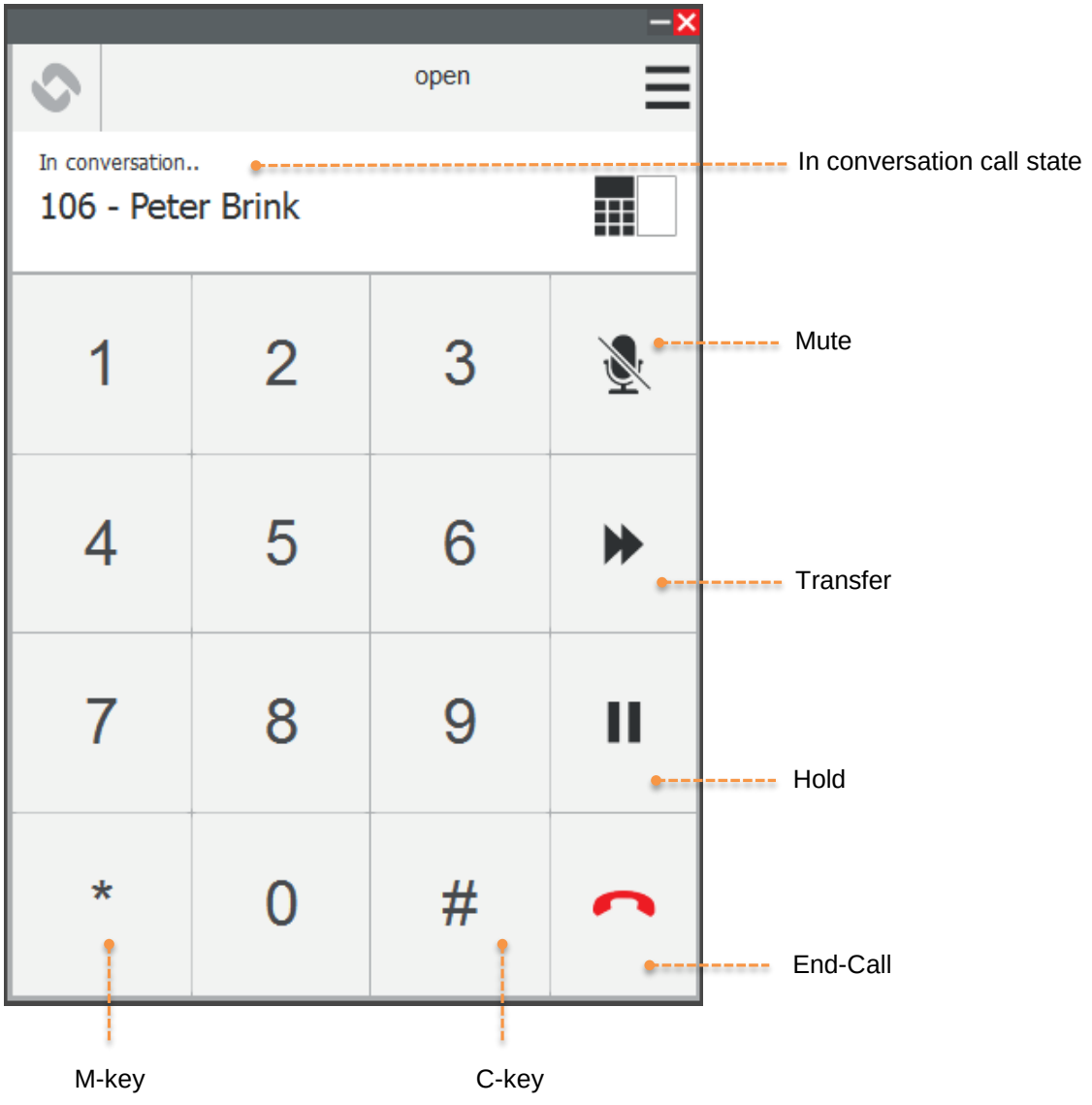


Figure 9 Full mode with keypad

3.5 Settings

To open the main menu:

- Click the menu icon (top right)

The **Settings** menu is used to set parameters such as **Account**, **Application**, **Call settings**, **Keyboard**, and **Function key**.

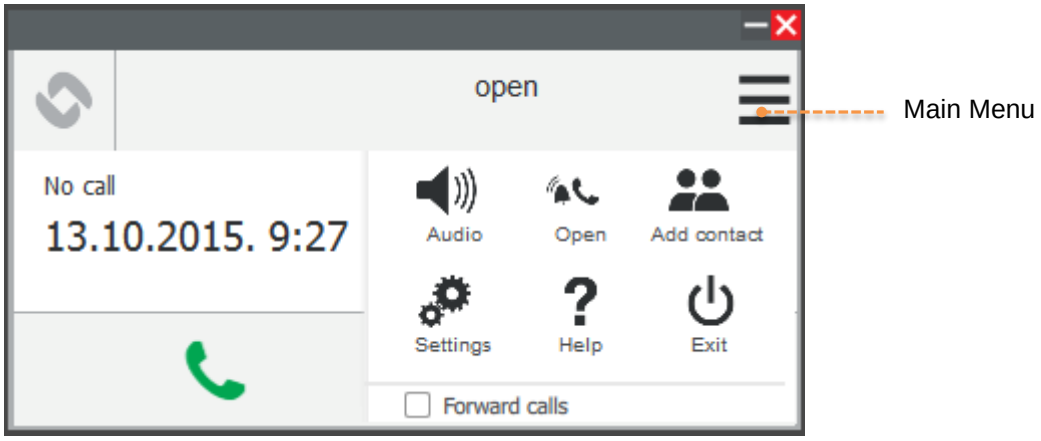


Figure 10 Main menu

To access the settings parameters:

- Click **Settings**

3.5.1 Account

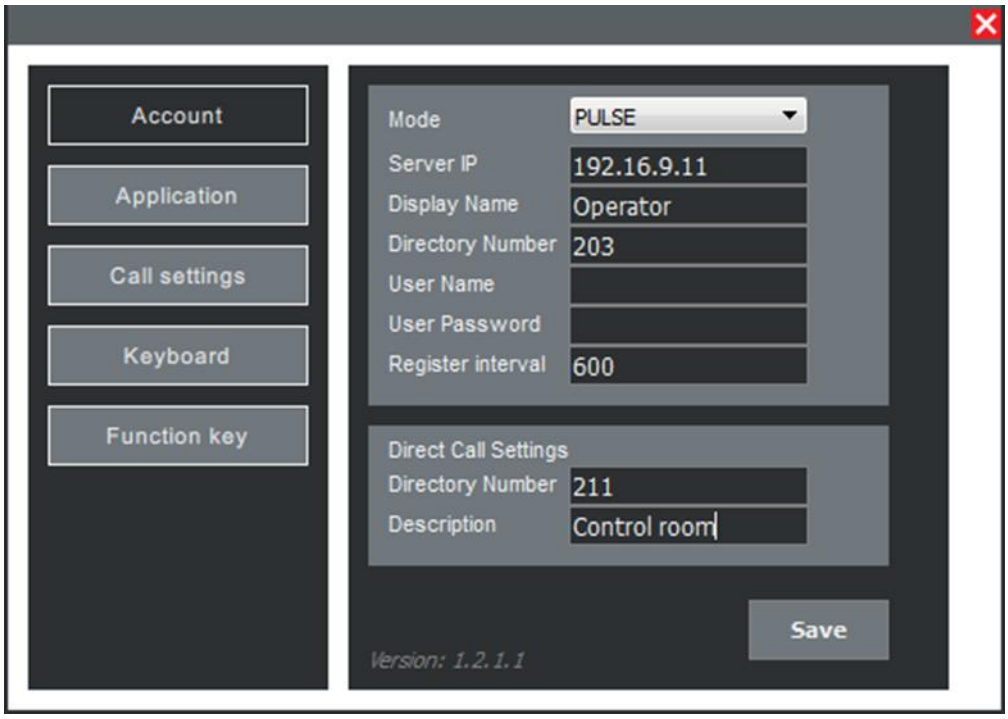


Figure 11 Account settings

ⓘ VS-Client currently supports Pulse mode only.

Before configuring the account, a system administrator needs to configure the Pulse Server directory and provide the user with the Pulse account settings.

Pulse Settings

- **Mode: PULSE**
- **Server IP**: IP address of the Pulse Server.
- **Display Name**: Identifying name on the Pulse Server.
- **Directory Number**: Directory number of the VS-Client.
- **User Name**: for server registration (optional).
- **User Password**: for server registration (optional).
- **Register interval**: Time used for performing re-registration (in seconds).

Direct Call Settings

This sets the green **Call key** as a direct access key.

- **Directory Number**: Number for making a direct call to
- **Description**: Identifying name for the direct call number. This description is only for local use by the application and does not need to correspond to the remote station's settings.

3.5.2 Application

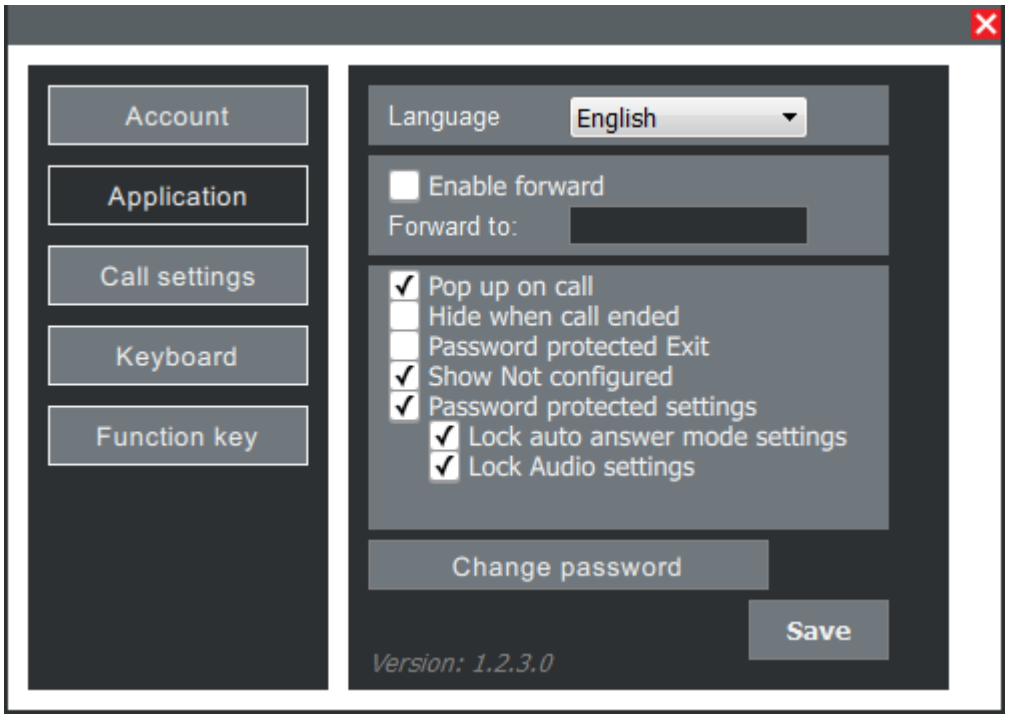


Figure 12 Application settings

Application settings control the general behavior of the VS-Client application.

Language:

- **Language**: Select a language

ⓘ To install additional languages, please contact Zenitel Customer Service.

Forward:

- **Enable forward**: Check the box to automatically forward incoming calls.
- **Forward to**: Enter a number to forward to.

UI settings:

- **Pop up on call**: Check the box to have the VS-Client pop up from the system tray on an incoming call.
- **Hide when call is ended**: Check the box to minimize the VS-Client to system tray when call is ended.
- **Password protected Exit**: Check the box to be prompted for password before exiting the VS-Client.
- **Show Not configured**: Check the box to show the message that VS-Client is not configured.
- **Password protected settings**: Check the box to enable the following two settings:
    - **Lock auto answer mode**: Check the box to disable auto answer mode settings in the main menu.
    - **Lock Audio settings**: Check the box to disable audio settings in the main menu.

Change Password:

Password is only used for the Password protected Exit feature, and it can be changed anytime in this window. Default password: **0000**

3.5.3 Call Settings

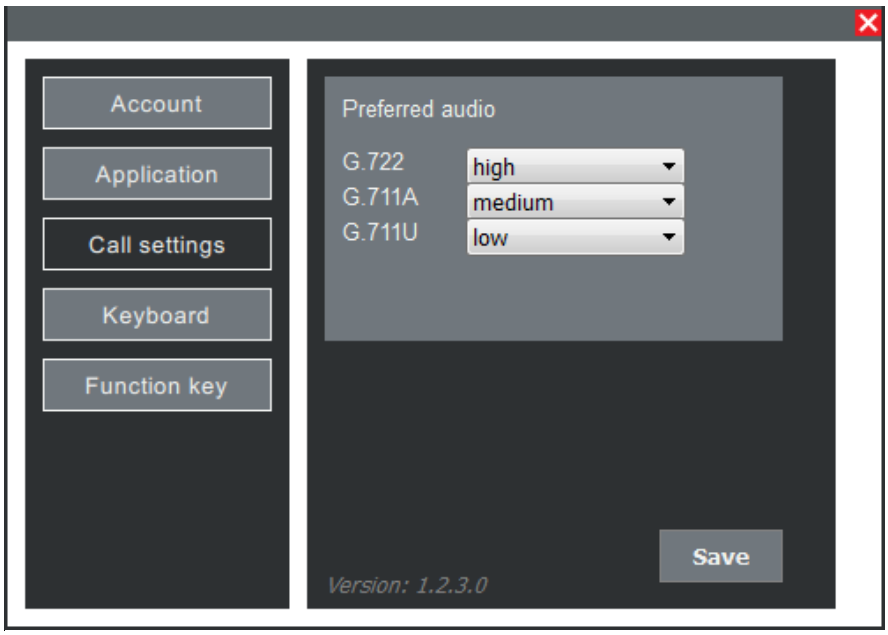


Figure 13 Call Settings

Call settings are used to define a priority for each audio codec that is supported.

Codec	Description
G.722 codec	HD Voice codec
G.711A codec	Telephony quality codec (European PCM standard)
G.711U codec	Telephony quality codec (American PCM standard)

3.5.4 Keyboard

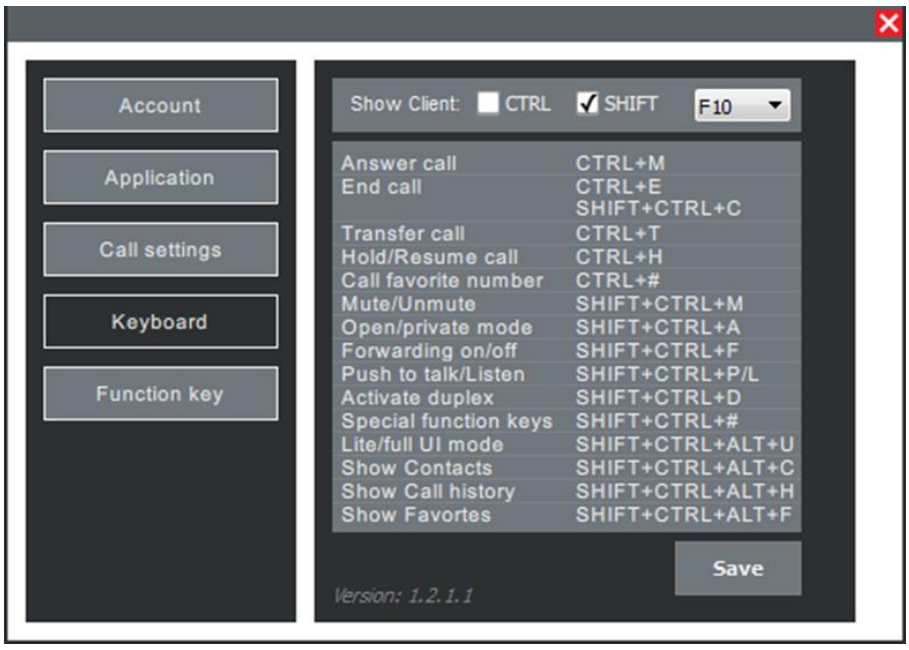


Figure 14 Keyboard settings

Keyboard settings define how the various functions can be controlled via keyboard shortcuts:

- **Show Client**: Select shortcut keys to use for showing the VS-Client window (popup from system tray or to maximize).

In the screenshot example above, to show the VS-Client window:

- Press **SHIFT + F10**

A list of keyboard shortcuts is displayed that can be used in VS-Client to control various functions.

3.5.5 Function key

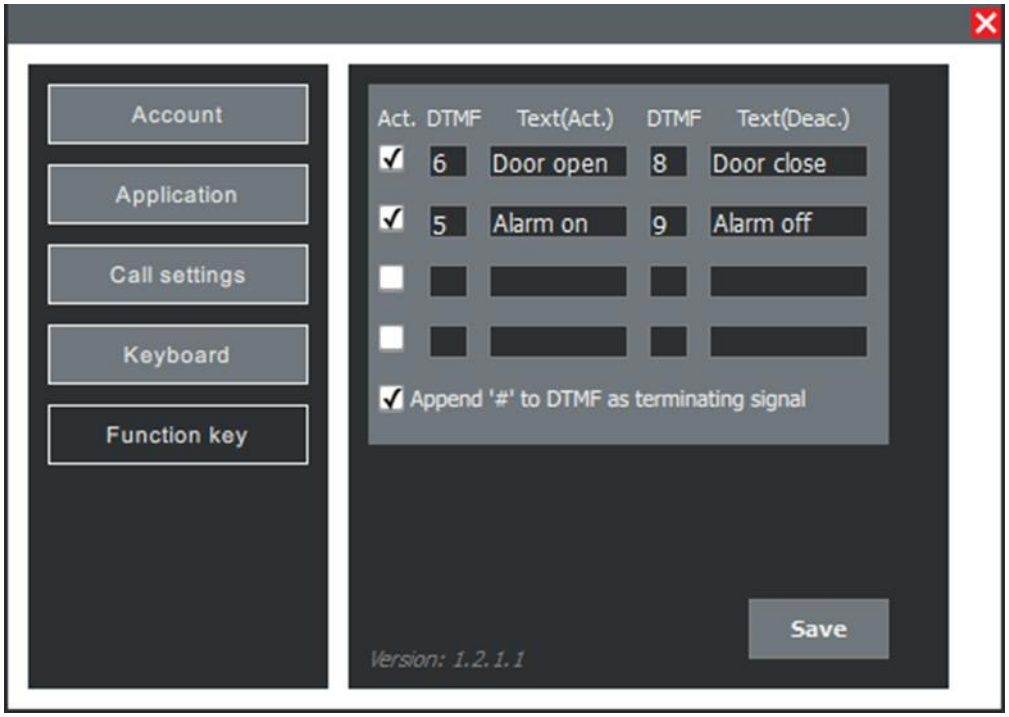


Figure 15 Function keys settings

Function keys settings define special function keys to be used during an active call:

- **Act**: Check the box if you want to activate the function key.
- **DTMF**: DTMF key sent on pressing the function key to activate it.
- **Text (Act.)**: Text that will appear on the function key when it's activated.
- **DTMF**: DTMF key sent on pressing the function key to deactivate it.
- **Text (Deac.)**: Text that will appear on the function key when it's deactivated.

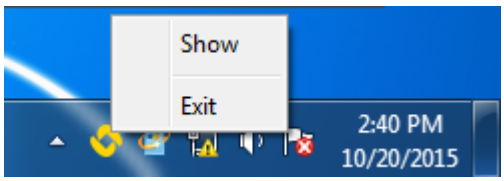
When both DTMF and Activate and Deactivate text values are defined, the function key will work in toggle mode, i.e. on the first click it will send the first DTMF value and change the label to the Text Deactivate value, and on the second click it will send the second DTMF value.

Append "#" to DTMF as terminating signal: Check the box to append "#" on the end of every DTMF sent.

4 Using VS-Client as an Intercom

From the Windows system tray, start VS-Client by doing the following:

- **Double-click the VS-Client icon**
- **Right-click the VS-Client icon** and from the context menu select **Show**
- Use the keyboard shortcut defined in **Settings** > **Keyboard** > **Show Client**
    - See section 3.5.4



4.1 Menu Options

To access the menu options:

- Click the main menu icon at the top-right of the window

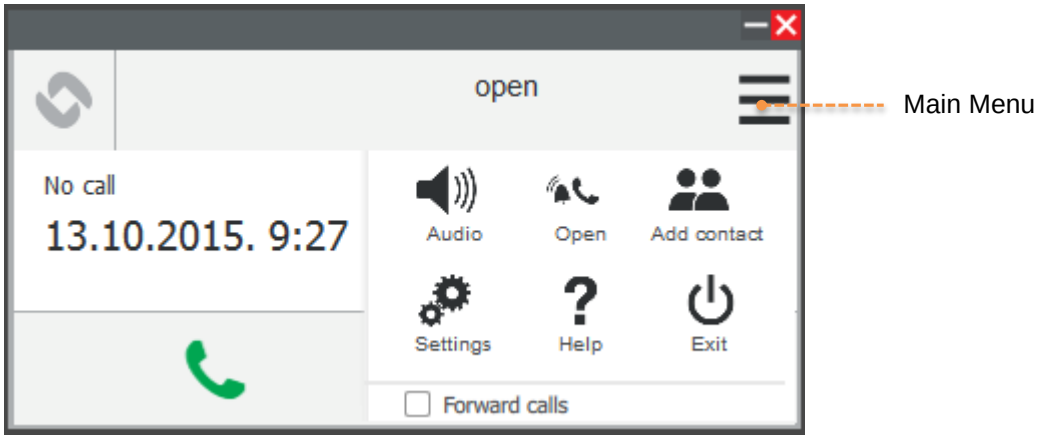


Figure 16 Main Menu

4.1.1 Audio

Audio settings show a list of available Speaker and Microphone devices. Speaker volume and microphone sensitivity can be adjusted. Volume values range from -80dB to 0dB.

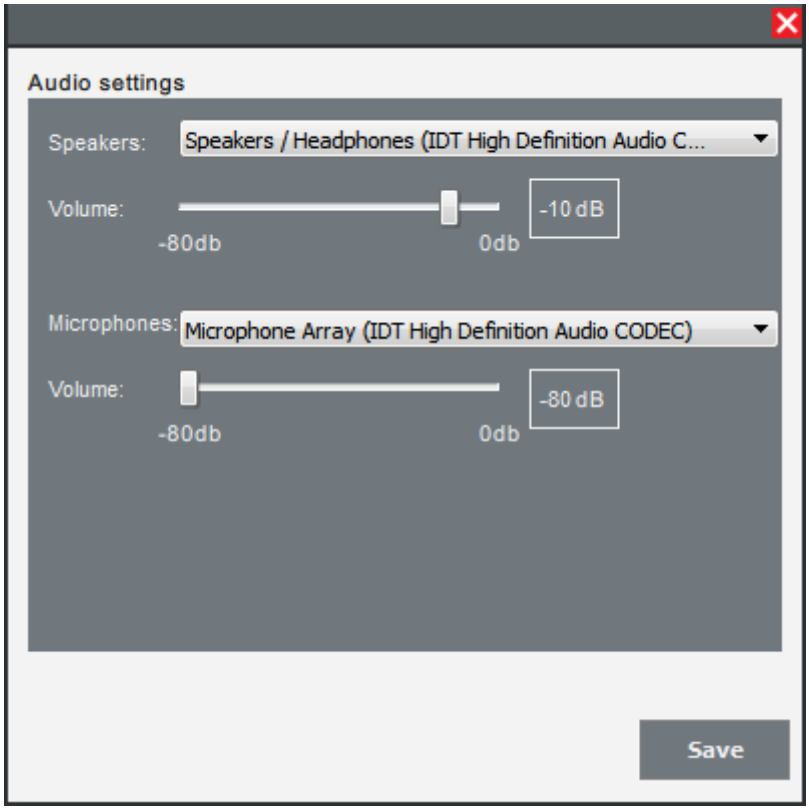


Figure 17 Audio Settings

4.1.2 Open/Private Answer Mode

VS-Client can be set either to Open or Private answer mode. In **Open** mode, incoming calls are automatically answered. In **Private** mode, calls are announced with a ringing tone.

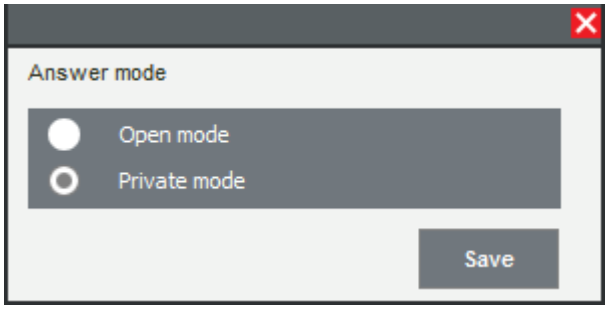


Figure 18 Answer Mode

4.1.3 Add contact

To add a contact individually:

- Enter values in the fields for **Name**, **Number**, and **Location**
- Click the **Add** button
  - the window will close

To add more than one contact at a time:

- Enter values in the fields for **Name**, **Number**, and **Location**
- Check the **Add another contact** box
- Click the **Add** button
  - the window will remain open for entering more contacts

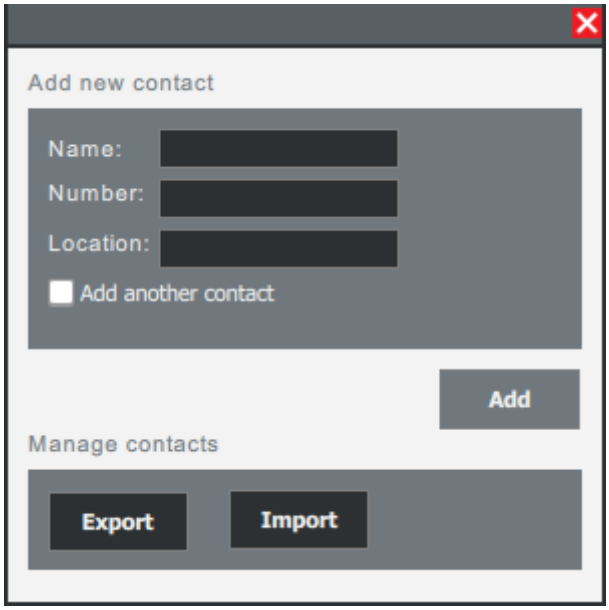


Figure 19 Add Contact

There is an option to **Import** or **Export** contacts. Existing contacts will be exported in the **.csv** file format. See *Appendix C: Importing Contacts from CSV File*.

4.2 Full Keypad with Extra Call Panels

This Full Keypad mode comprises a numeric keypad and 3 available call panels: **Contacts**, Call **History** and **Favorites**.

To toggle between Lite and Full mode:

- Click the Lite/Full mode icon
- Double-click on any entry in the call panel to make a call to the specific number.

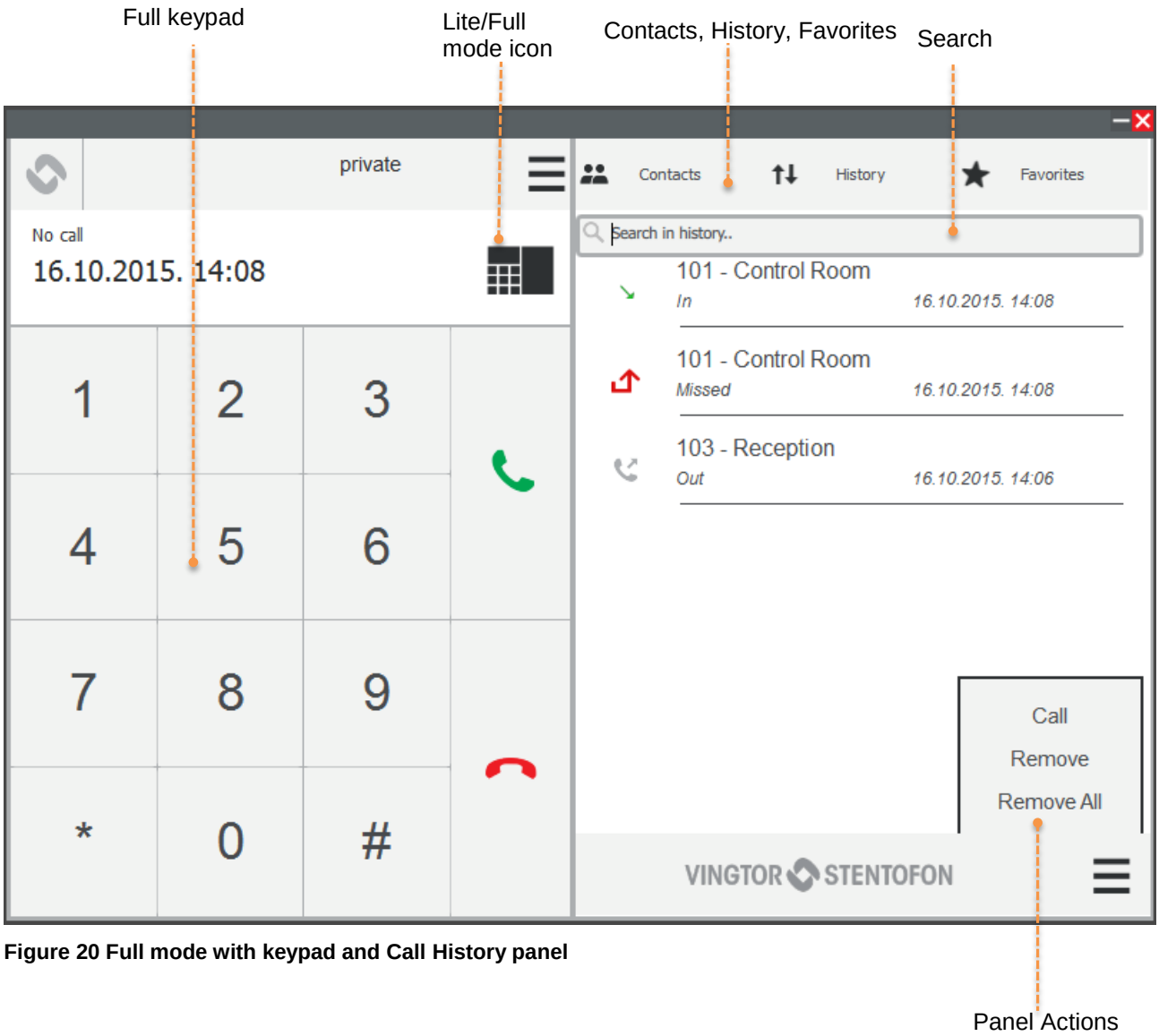


Figure 20 Full mode with keypad and Call History panel

4.2.1 Contacts

The **Contacts** panel displays a list of all defined contacts. The Search field can be used to search for contacts.

- To add more contacts select **Main Menu** > **Add contacts**
  - see section 4.1.3

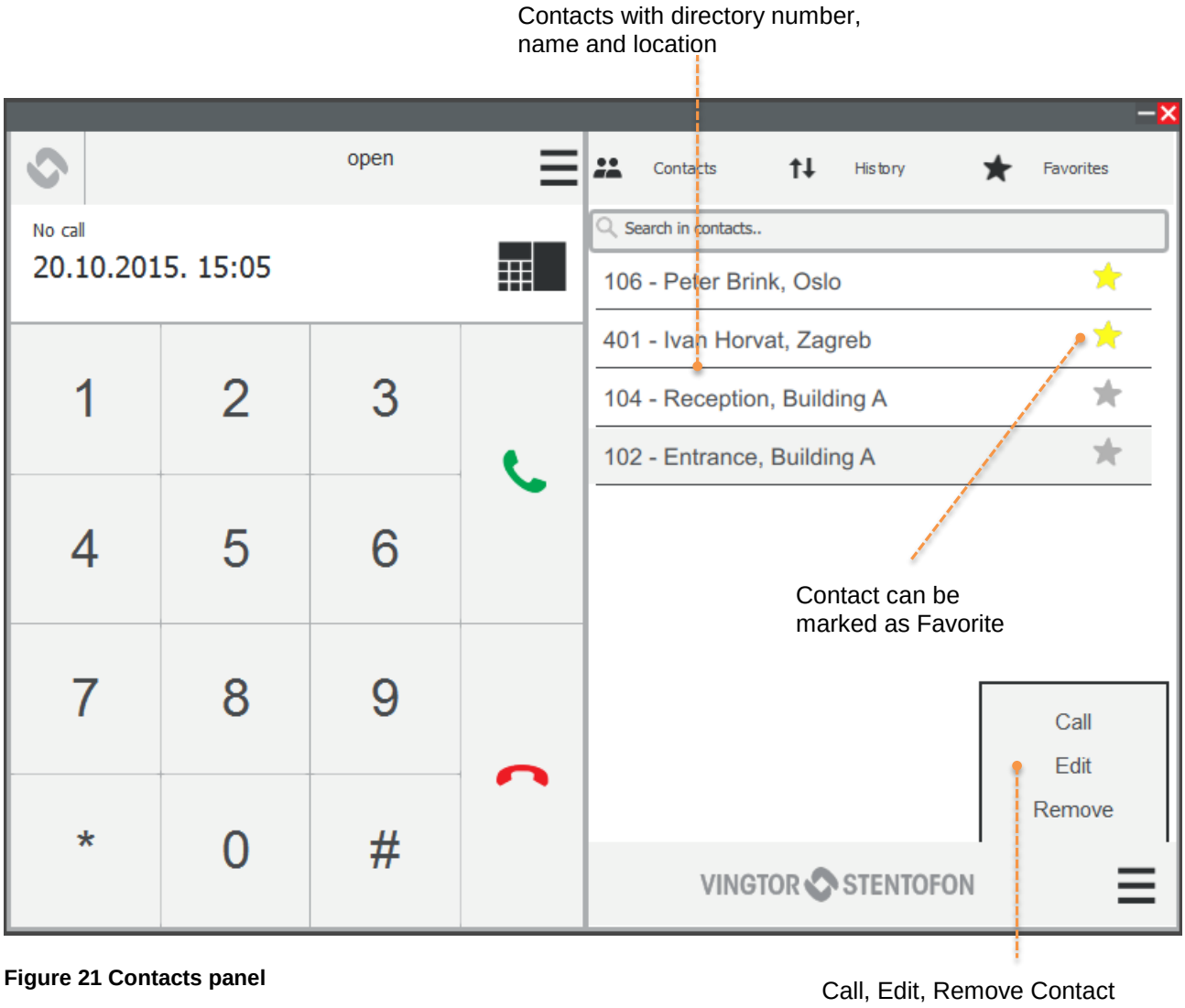


Figure 21 Contacts panel

To define a contact as Favorite:

- Click the **star icon** adjacent to the contact
  - the star will turn yellow

4.2.2 History

The call **History** panel shows a list of all incoming, outgoing, and missed calls. The list can be searched by name or number.

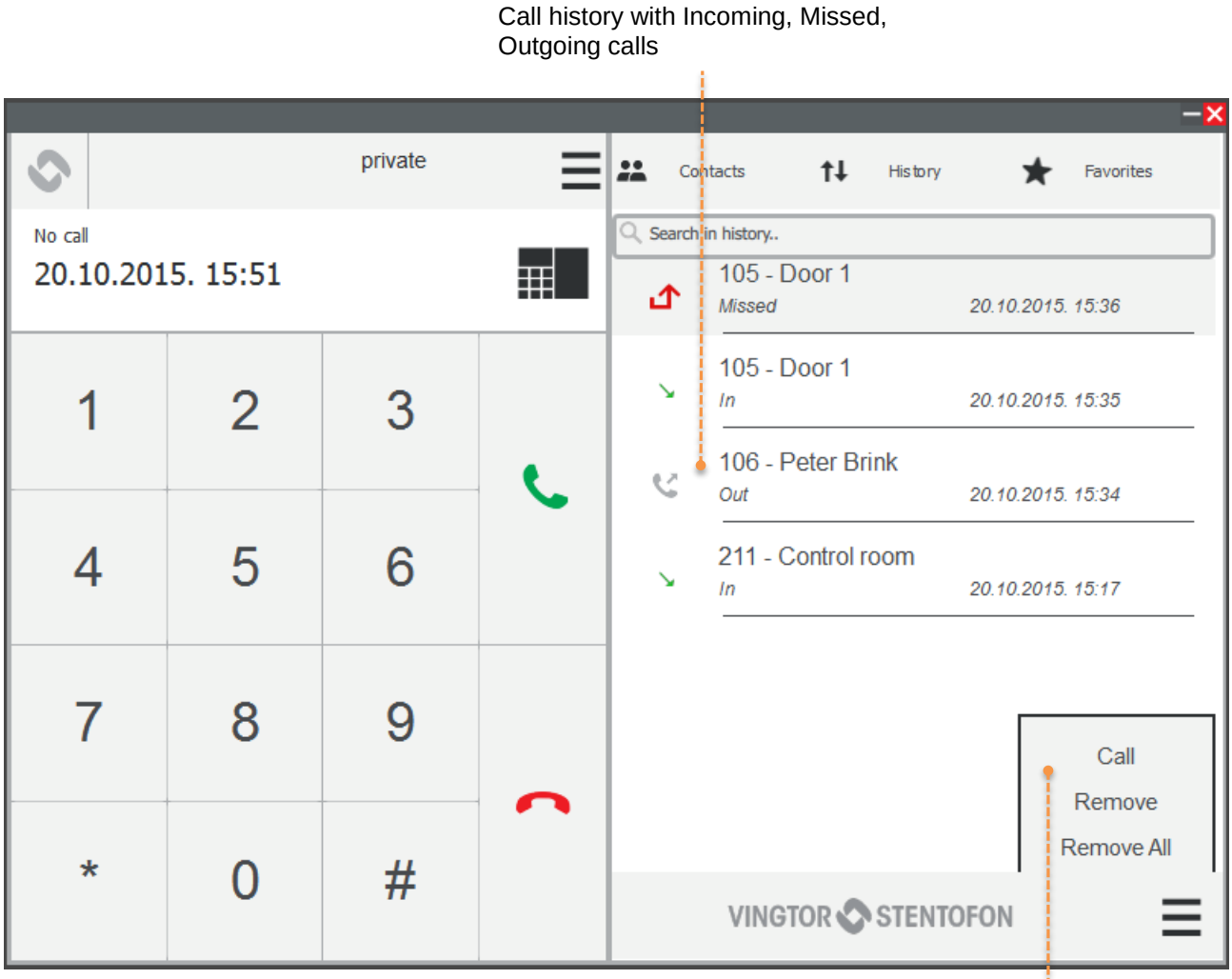


Figure 22 Call History Panel

4.2.3 Favorites

Favorites comprises 9 placeholder panels that can be populated with favorite contact names and numbers. Contacts are defined as Favorites in the Contacts panel. See section 4.2.1.

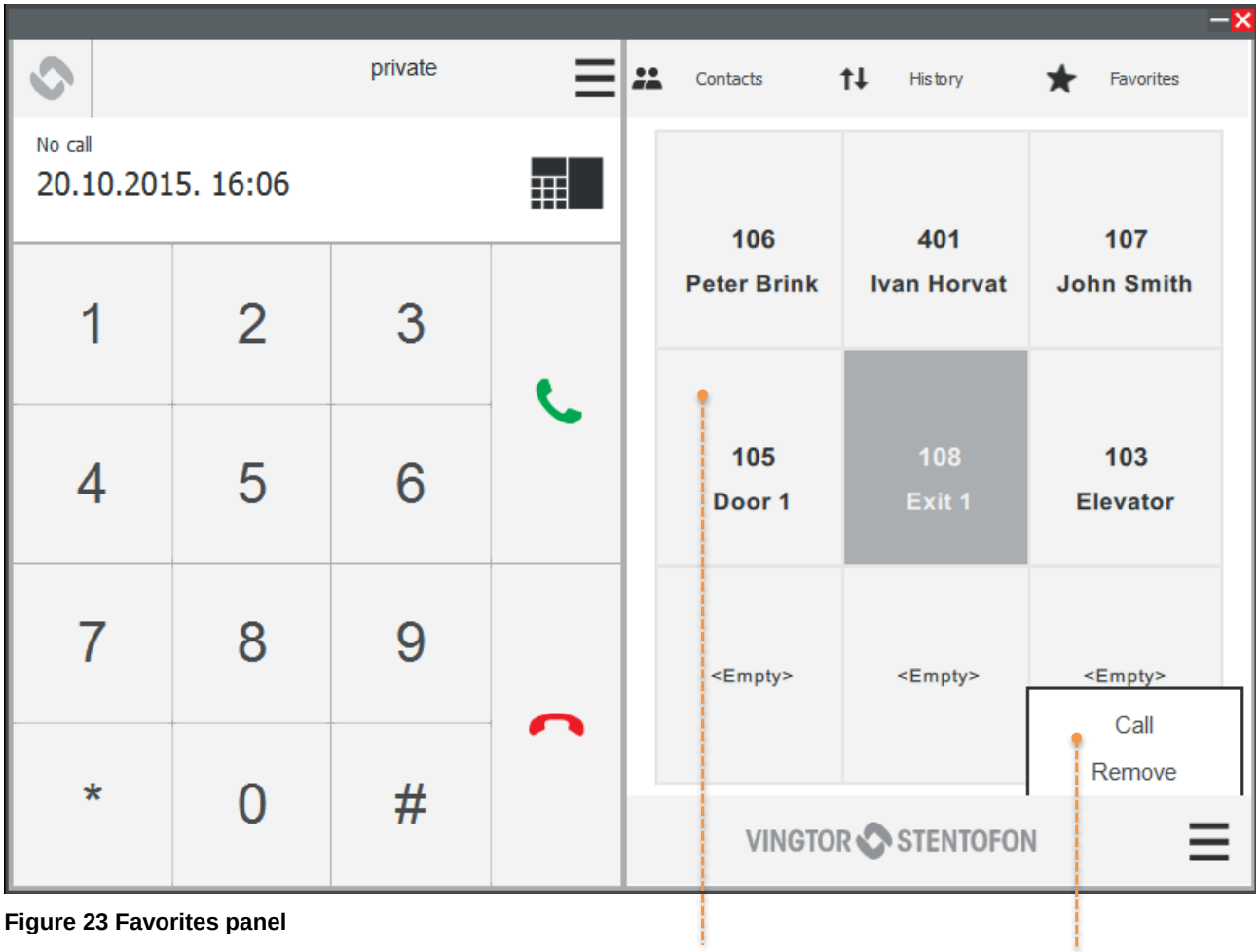


Figure 23 Favorites panel

Favorites consist of directory number and name. Can also be dialed with **CTRL** + # shortcut.

Call a favorite number, or remove it from Favorites

4.3 Making a Call

There are several ways of making a call:

- Dial number in keypad + click **green Call key**
- Dial number using **PC numeric keyboard** + **Enter**
- Double-click an item in the **Contacts**, **History** or **Favorites**
- Double-click the **USB button**
  - Double-clicking the USB button will establish the last active call. See section *5 USB Control Button*
- Click the **green Call key**
  - A call can be made directly without entering a number by just clicking the Call key if it has been set as a DAK in **Settings** > **Account** > **Direct Call Settings**

4.4 Answering a Call in Private Mode

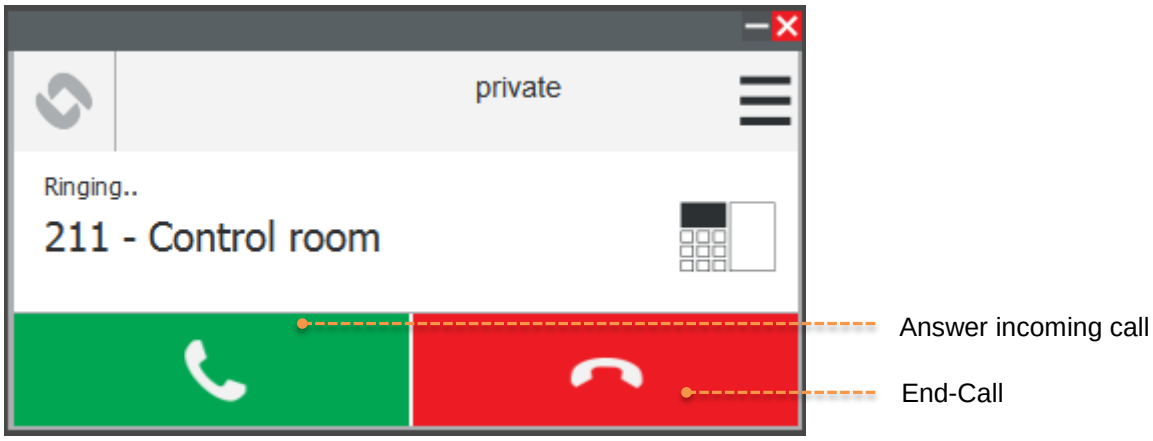


Figure 24 Incoming call

To answer a call in private mode:

- Click the **green key**

4.5 Actions during the Call

During an active call there are several actions that can be performed. These are:

- Mute the call
- Put the call on hold
- Transfer the call.

The user can also send a DTMF key by clicking one of the special function keys that are defined in **Settings** > **Function key**.

4.5.1 Mute / Hold / End-Call

- Click the **Mute**, **Hold**, or **End-Call** keys to perform the desired functions.

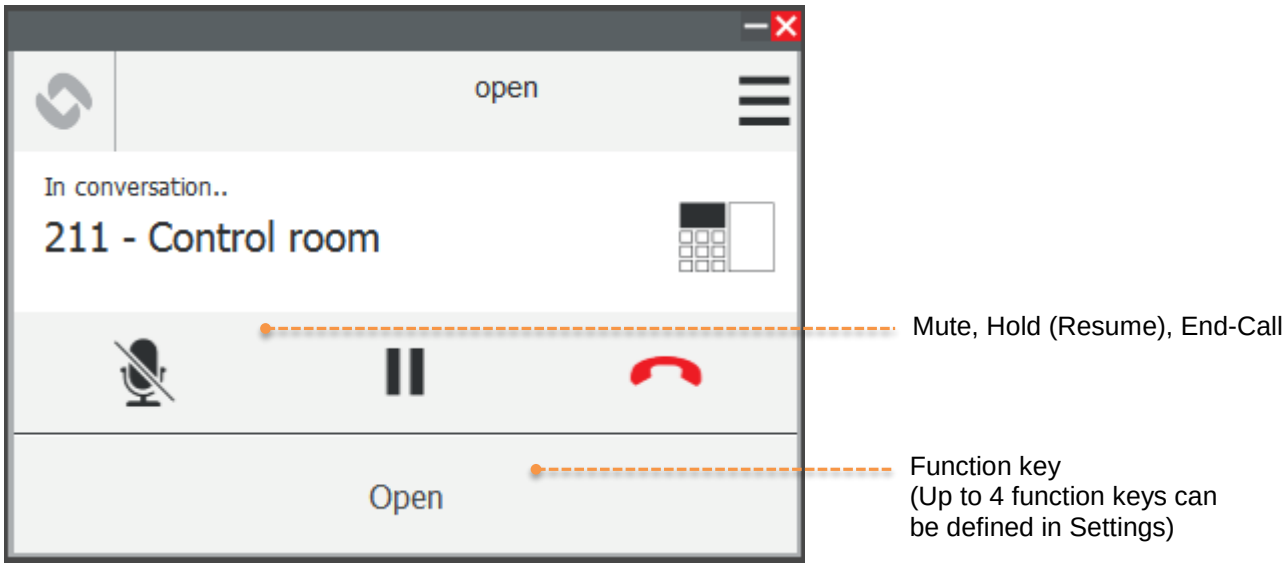


Figure 25 Call Actions

4.5.2 Transfer a Call

To transfer a call:

1. Click the **Transfer-Call key** (forward-arrows symbol)
2. Enter the number to transfer to
3. Click the Transfer-Call key again

The active call will be transferred and immediately terminated in VS-Client.

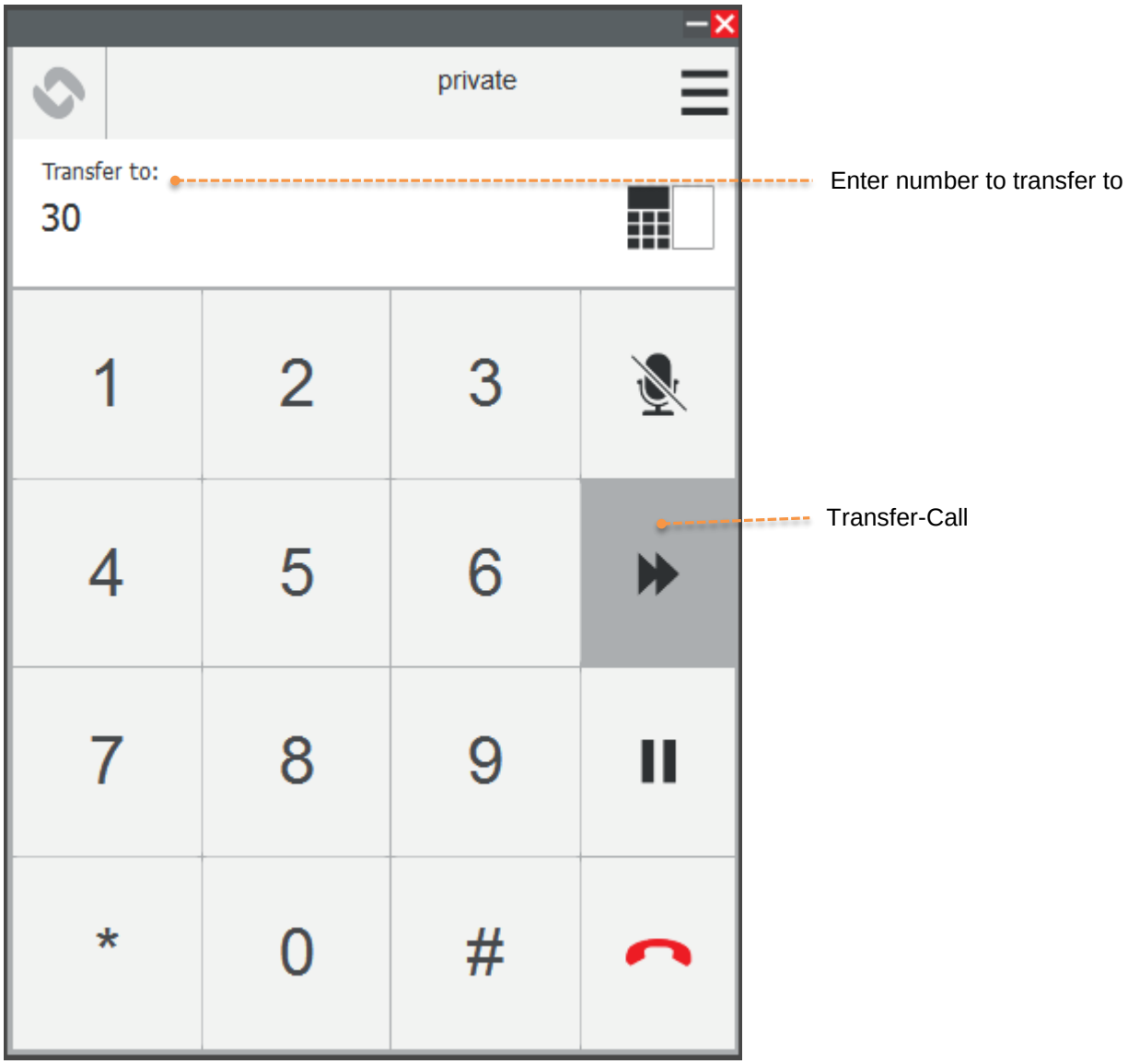


Figure 26 Call actions: Transfer call

4.5.3 Call Queue

When VS-Client receives an incoming call while there is an active call in progress, a notification will be displayed about a call being placed in the queue.

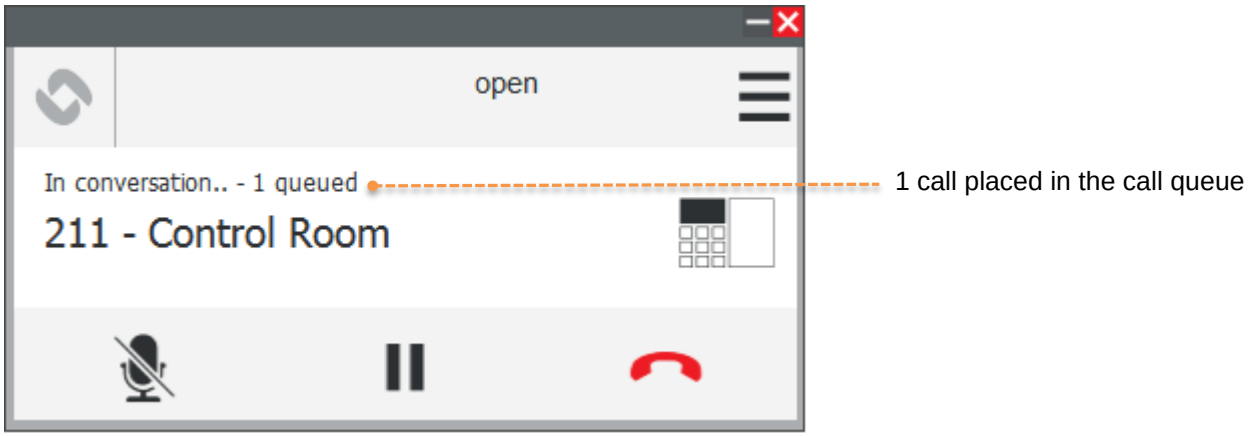


Figure 27 Call Queue Notification

As soon as the active call is terminated, the first call in the queue will be answered.

Up to 4 incoming calls can be placed in the queue.

5 USB Control Button

VS-Client can also be controlled by an optional external USB button. This button is connected to a USB port on the PC and all necessary software drivers are automatically installed. Actions on the button are detected by the VS-Client as long as the application is running and is not dependent on the application having focus.

Figure 28 USB Control Button

5.1 Actions and States

While there is an incoming call (VS-Client is ringing)

- The button will flash green
- Press the button once to accept the call
- Press the button twice to reject and terminate the call

While there is an ongoing call:

The button will light green during an ongoing call.

- Press and hold the button to go into “talking” mode
  - the button will light red.
- Release the button to go into "listening" mode
  - the button will light green.
- Press the button twice to terminate the call
  - the button will flash red
- Press the button thrice to revert the conversation back to "duplex" mode

While there is no ongoing call:

- Press the button twice to re-establish the last active call
- Press the button thrice to open the VS-Client GUI.
  - the button will flash blue

In Private mode: An incoming call (ringing) will be indicated by the button flashing yellow, while an ongoing call will be indicated by the button flashing green.

Appendix A: VS-IMT Configuration

In the special case of using VS-SDK for a Pulse-enabled project, VS-Client must be configured from the VS-IMT (Intercom Management Tool). The following settings are configurable:

- **General Settings**
  Directory Number, Display Name (Nickname on network), Server IP.
- **Audio Settings**
  Speaker and Microphone volume, Noise cancellation, Audio profile, Conversation mode.
- **Call Settings**
  Auto answer can be enabled.
- **Other Settings**
  Username and password.

See *A100K11619 VS-IMT Technical Manual* for further details.

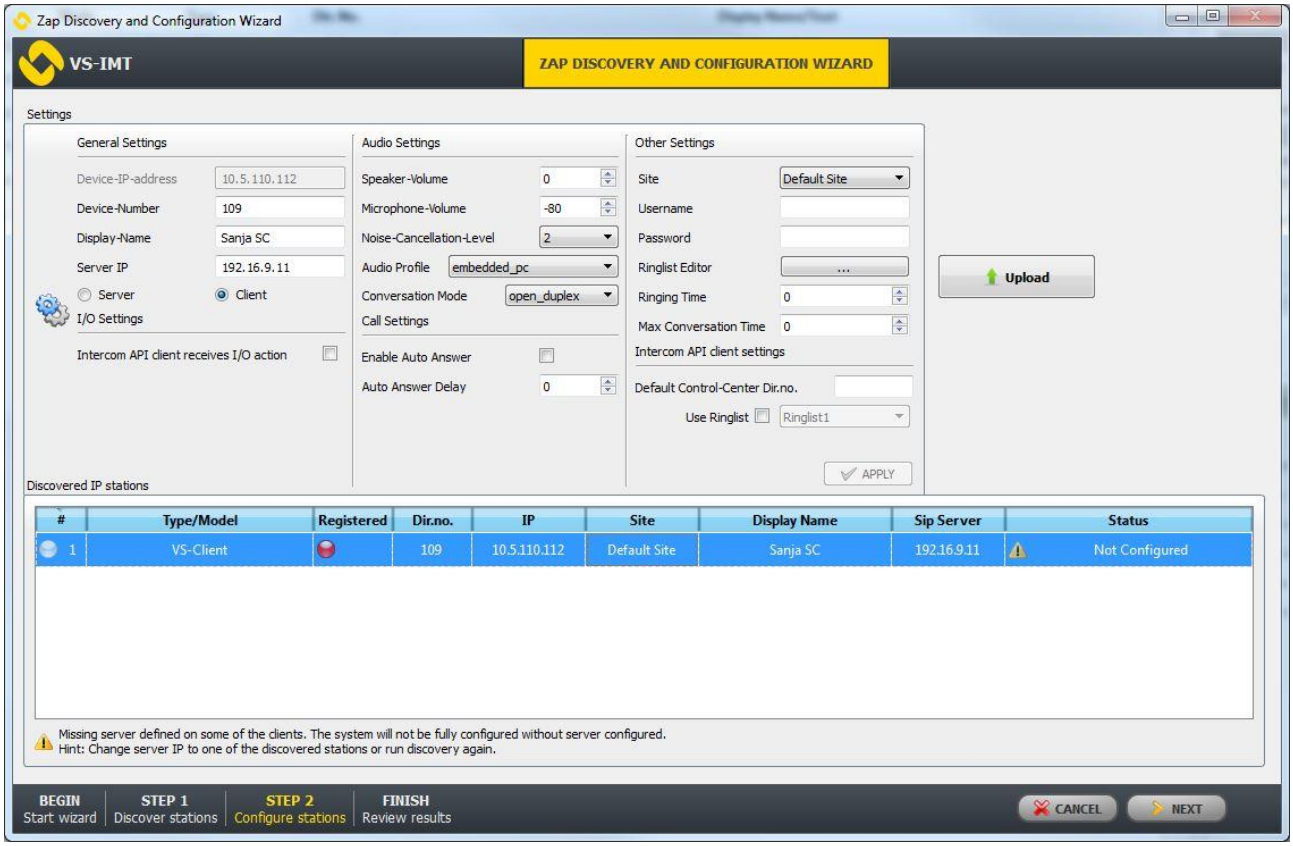


Figure 29 VS-IMT Configuration of VS-Client

This type of configuration should only be used if VS-SDK for Pulse is needed in the system. The standard way of configuring the VS-Client is via the application's **Account** settings and station web interface on the Pulse Server device. Note that *Vingtor Stentofon ZAP Service* needs to be running for this type of configuration.

Appendix B: PC Keyboard Shortcuts

It is possible to execute many functions in VS-Client with the use of keyboard shortcuts on the PC.

Function	Keyboard Shortcut
Answer Call	CTRL + M
End Call	CTRL + E SHIFT + CTRL + C
Transfer Call	CTRL + T
Hold/Resume Call	CTRL + H (toggle)
Call Favorite Number	CTRL + #
Mute/Unmute	SHIFT + CTRL + M (toggle)
Open/Private Answer Mode	SHIFT + CTRL + A (toggle)
Forwarding On/Off	SHIFT + CTRL + F (toggle)
Push-To-Talk/Listen	SHIFT + CTRL + P / L
Activate Duplex	SHIFT + CTRL + D
Special Function Keys	SHIFT + CTRL + #
Lite/Full Mode	SHIFT + CTRL + ALT + U (toggle)
Show Contacts	SHIFT + CTRL + ALT + C
Show Call History	SHIFT + CTRL + ALT + H
Show Favorites	SHIFT + CTRL + ALT + F

All basic functions can be performed via the numeric keyboard on the PC.

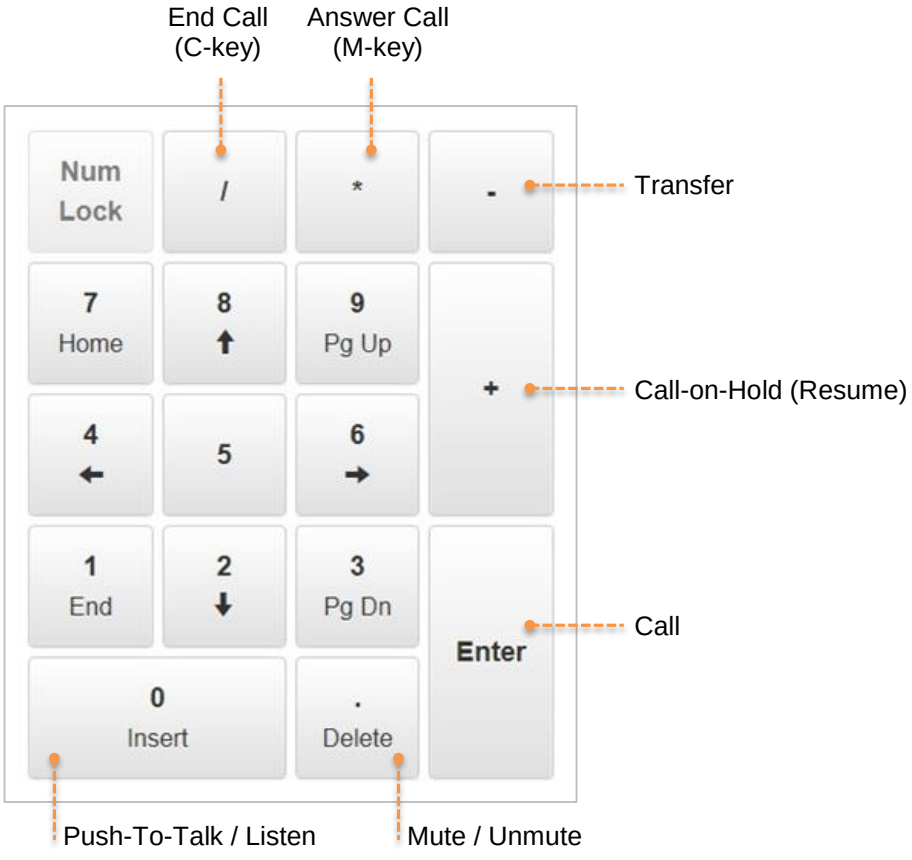


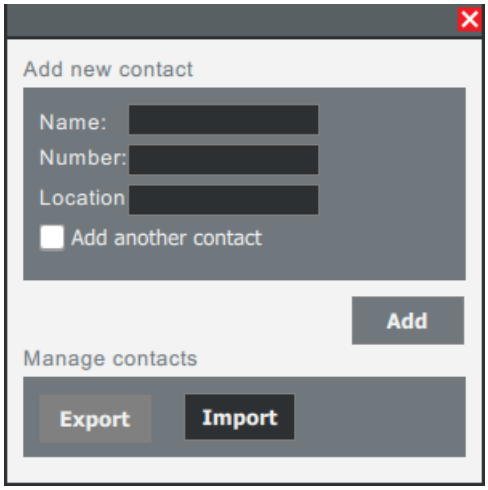
Figure 30 Numeric Keyboard Shortcuts

Appendix C: Importing Contacts from CSV File

Contacts can be exported to or imported from a CSV file for ease of distribution.

To import or export a CSV file:

- Select **Main Menu** > **Add contact** > **Export/Import**



The structure of the CSV file is: **Name;Number;Location**

ⓘ DO NOT use quotation marks.

Here is an example of a CSV file in a plain text editor:

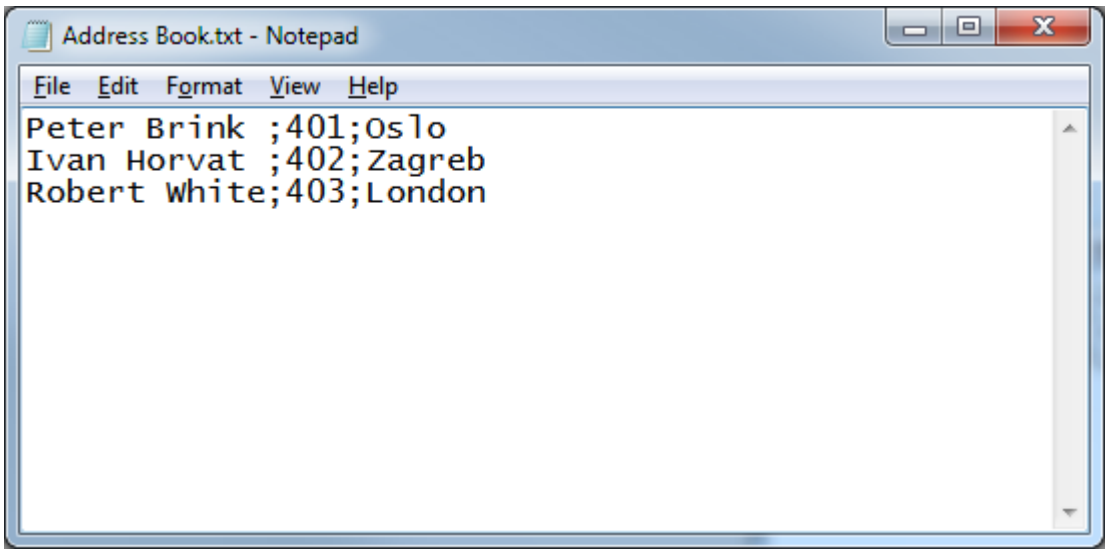


Figure 31 CSV file with contacts

The CSV file can be edited in the Excel program.

Appendix D: “Parking Management” Edition Full Mode GUI

VS-Client also exists in a “Parking Management” edition with some differences in user interface and slight differences in functionality.

Vingtor-Stentofon ZAP Service

Zap service is required and an Error message is shown if the service is not running

Account Settings

Network settings (Mode, Server IP, Display Name and Directory Number) are disabled. The only way to configure VS-Client is by using the **VS-IMT** tool.

Figure 32 Account settings in "Parking Management" edition

Application Settings

Enable full mode (Full mode requires full license). The “Parking Management” edition supports 2 different VS-Client application modes, Lite and Full mode. If VS-Client Full mode is licensed in the system, enabling this option would provide a functionality to switch between Lite and Full GUI mode. See section 3.4 about the *Main User Interface*.

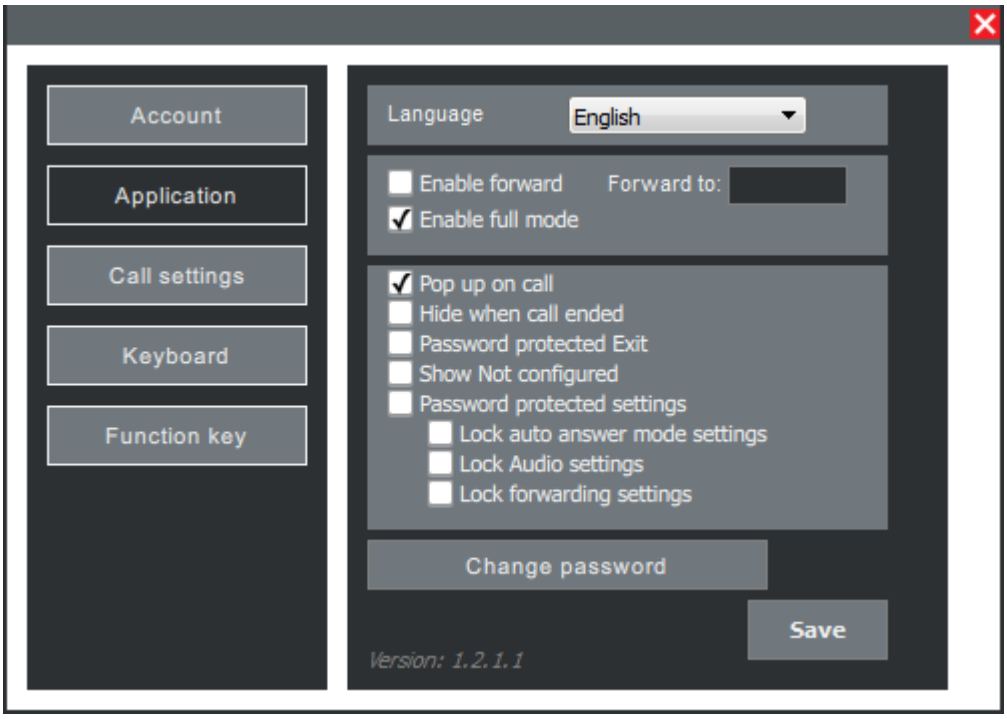


Figure 33 Application settings in "Parking Management" edition

Lock Forwarding Settings

- Check the box to disable forwarding settings in the main menu.

Appendix E: “Parking Management” Edition Lite Mode GUI

VS-Client in the “Parking Management” edition can be used in Lite mode.

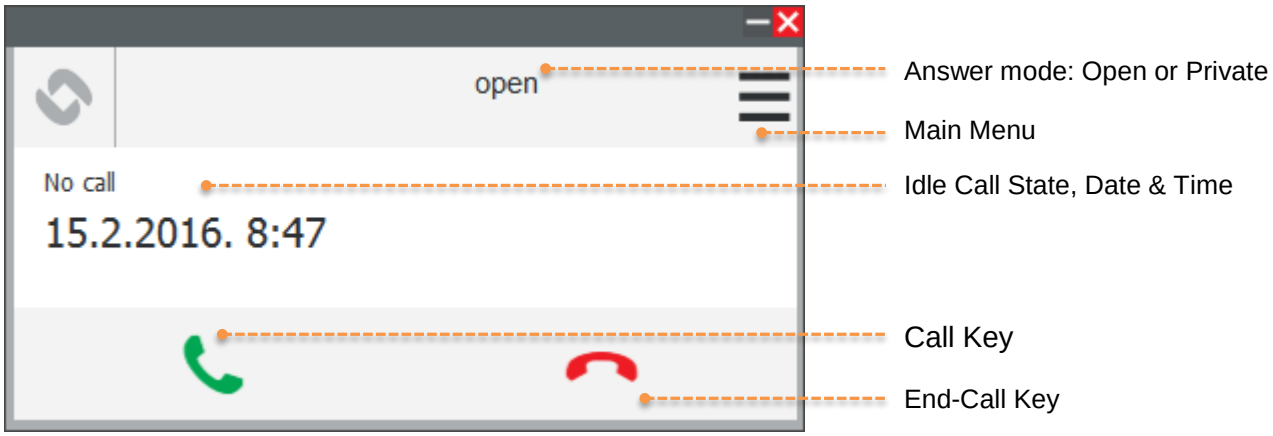


Figure 34 Lite mode in idle call state

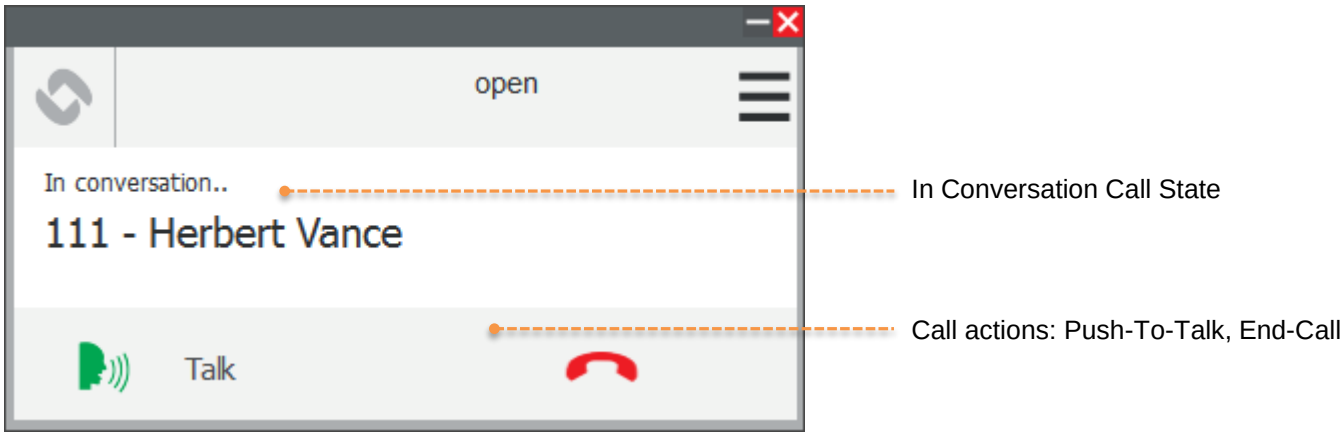


Figure 35 Lite mode in conversation call state

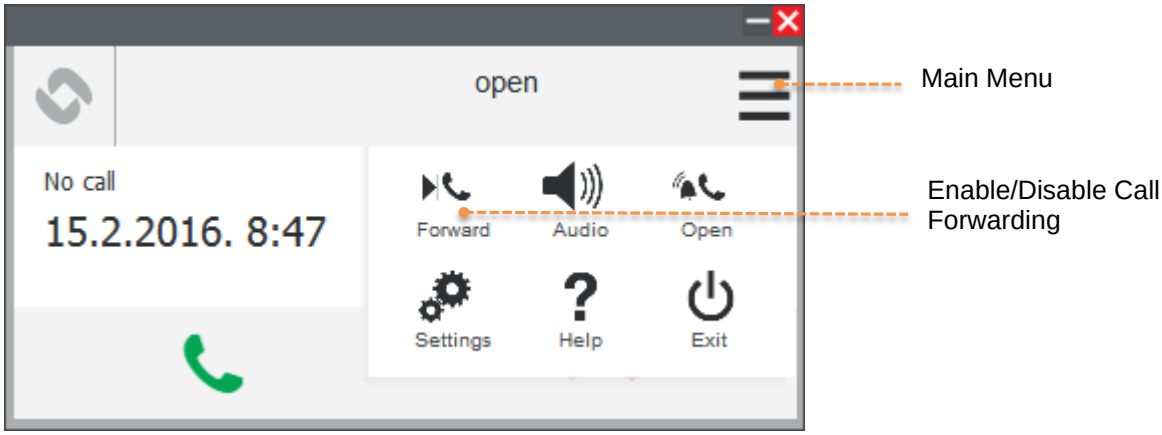


Figure 36 Enabling Call Forwarding from Menu

The **Settings** window in “Parking Management” edition Lite mode has 3 menu tabs.

Account Settings

- **Pulse Settings are visible but disabled**
  Server IP: IP address of the Pulse Server
  Display Name: Identifying name on the Pulse Server
  Directory Number: Directory number of the VS-Client
- **Direct Call Settings** sets the **green Call key as a direct access key**:
  Directory Number: Number for making a direct call to
  Description: Identifying name for the direct call number. This description is only for local use by the application and does not need to correspond to the remote station’s settings.

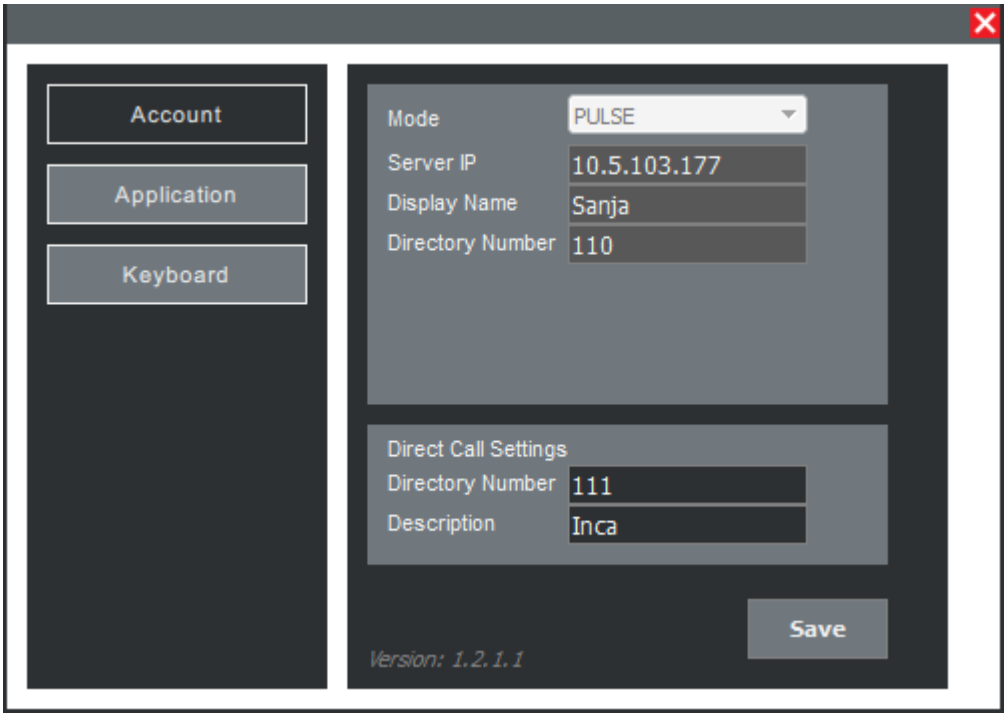


Figure 37 Account Settings

Application Settings

See section Appendix D: “Parking Management” Edition Full Mode GUI under *Application Settings*.

Keyboard Settings

Keyboard settings in Lite mode of the “Parking Management” edition offers a limited set of functions as compared to Full mode.

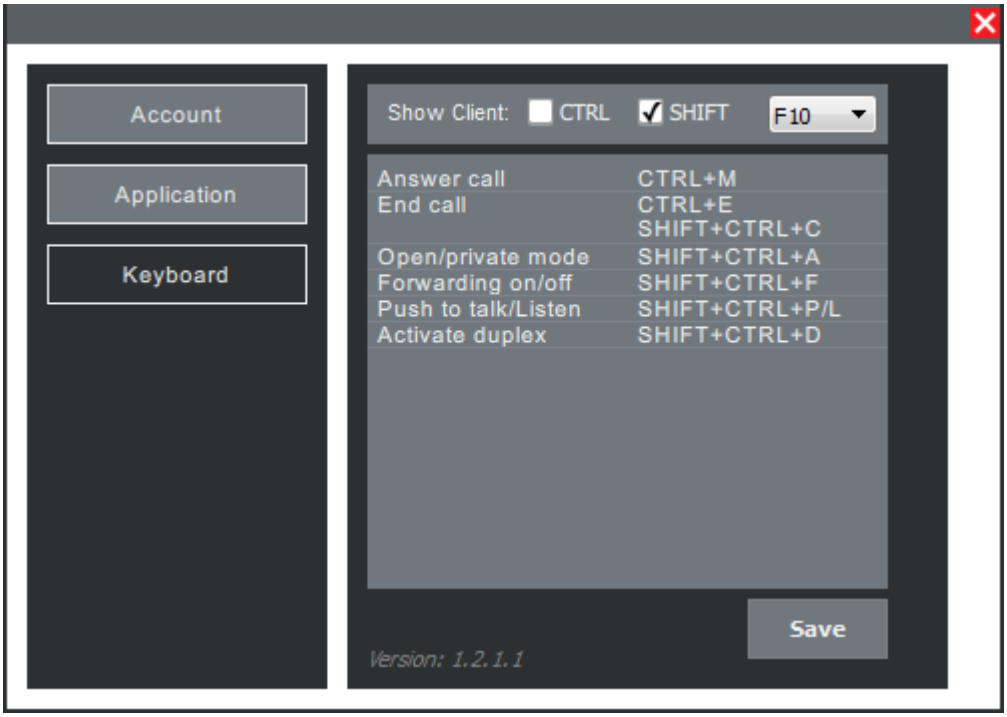


Figure 38 Keyboard Settings

See section 3.5.4 on Keyboard Settings.

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