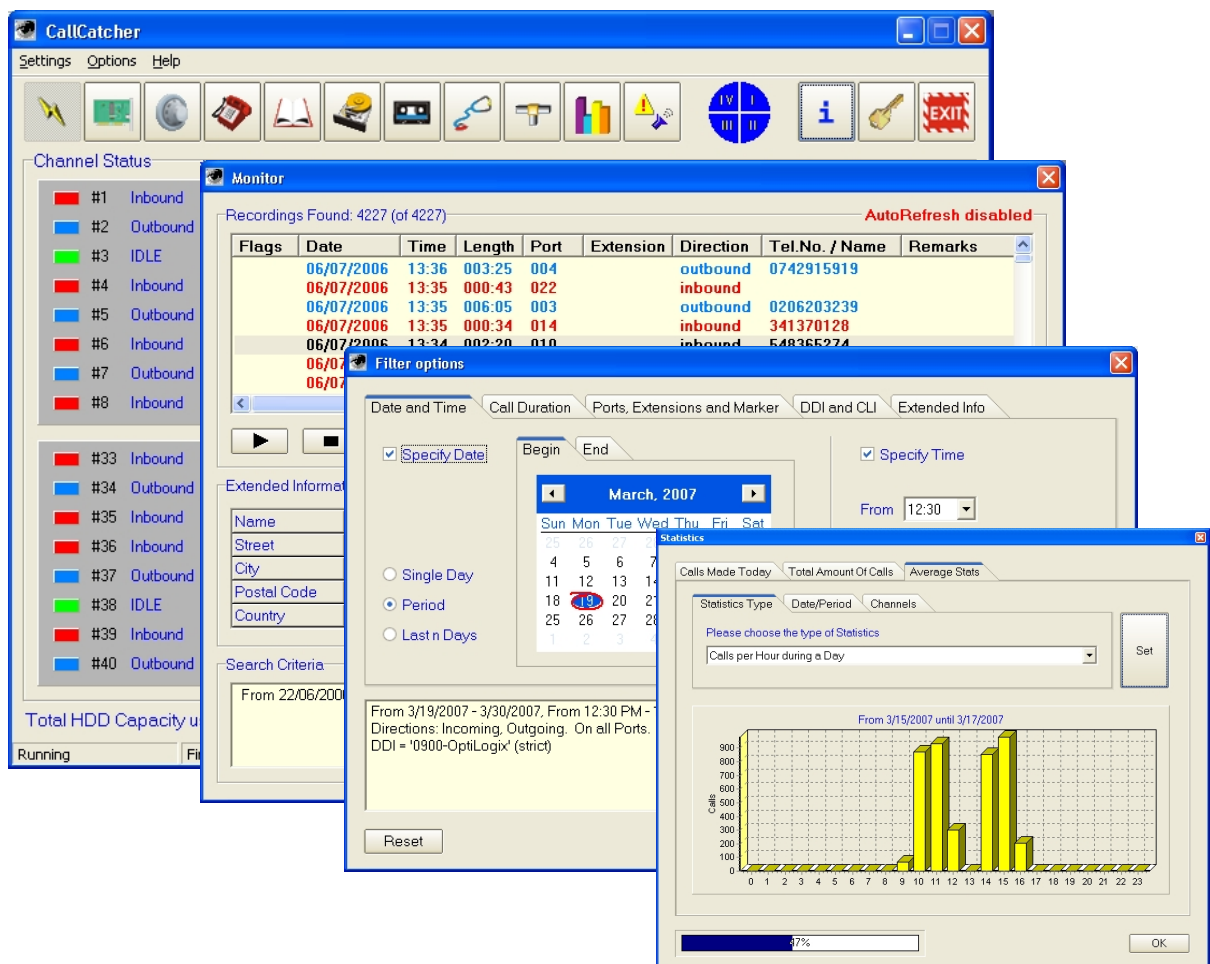


CallCatcher®

Users Manual



Version: 3.12 UK

Date: November 2007

Reference: CCR-UK312

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1. INTRODUCTION

1.1 PRODUCT DESCRIPTION

The **CallCatcher** is an advanced Win-2000, Win-XP, Win-2003 and Windows Vista compatible Call Monitoring, Recording and Logging system.

Each CallCatcher system is usually delivered as a complete Windows based 19" rackmount industrial server system. Typically all external telephone lines (also referred to as "ports" or "channels") are monitored by the system in a transparent and non-intrusive way. This means that external callers or users of internal extensions cannot hear or notice that their call is being monitored. The CallCatcher monitors each line in such a way that the line itself is not affected at all.

1.1.1 Features

The **CallCatcher** offers many advanced features combined with an intuitive user interface. Some of the outstanding features are:

- Capacity from 4 up to 256 ports in a single industrial 19" chassis.
- Analog Extension, Analog CO Line, Digital Extension, Basic Rate ISDN (S₀ bus) and Primary Rate ISDN (ISDN30).
- Superior voicerecording quality at 64kbit/s, 36kbit/s, 16kbit/s and 8kbit/s proprietary compression.
- Integrated phonebook to provide detailed caller information.
- Advanced user and security management.
- Ultra secure encrypted recordings.
- Extensive searching capabilities.
- Extra text like remarks or notes can be added to every recording.
- Live monitoring and playback (locally or over the LAN).
- Integrated scheduled backup facilities. Export facility for MP3.
- LAN integration with remote search and voice playback tools.
- PBX SMDR (extension information) integration using **CallLink**.

1.1.2 Minimum System requirements

- Win-2000, Win-XP, Win-2003 or Windows Vista.
- Pentium-4 based industrial server system with a minimum of 1024 MByte RAM and 1800MHz+ CPU. This figure is based on a 30 - 60 channel recorder and a maximum of 100.000 recordings in the database. More internal RAM memory and a faster CPU is recommended for configurations with more channels and more recordings.
- The amount of internal RAM memory must be sufficient to handle a large amount of recordings. For each additional 100.000 recordings expected, it is recommended to add a minimum of 128 MByte RAM to the total internal RAM count.
- LAN network interface card. TCP/IP network protocol installed.
- 5 Volts compatible half- or full size standard PCI slot(s).
- PCI Express (PCIe) slot(s).
- Windows compatible sound card.

1.1.3 Recommendations

- A backup facility like a DVD writer to make periodical backups of the recordings made earlier using the build-in backup facilities. Backup drives or LAN backup directories should be mapped as logical drives that can be accessed by the CallCatcher server.

2. INSTALLATION

2.1 PREPARATION

Before powering up the system, always check whether the proper mains voltage is set. This system is not different from standard Windows-2000, XP, 2003 or Vista industrial machines and other electronic equipment. It therefore should be installed in a safe and preferably air-conditioned server room or office environment. Like standard systems, you need to connect the display, keyboard, mouse, network and all other necessary peripherals first before starting up the system.

Your systems administrator is responsible for managing the user settings and network access rights to every user on the connected LAN. This should be done on network, system and application level before usage.

2.2 WINDOWS USAGE AND SETTINGS

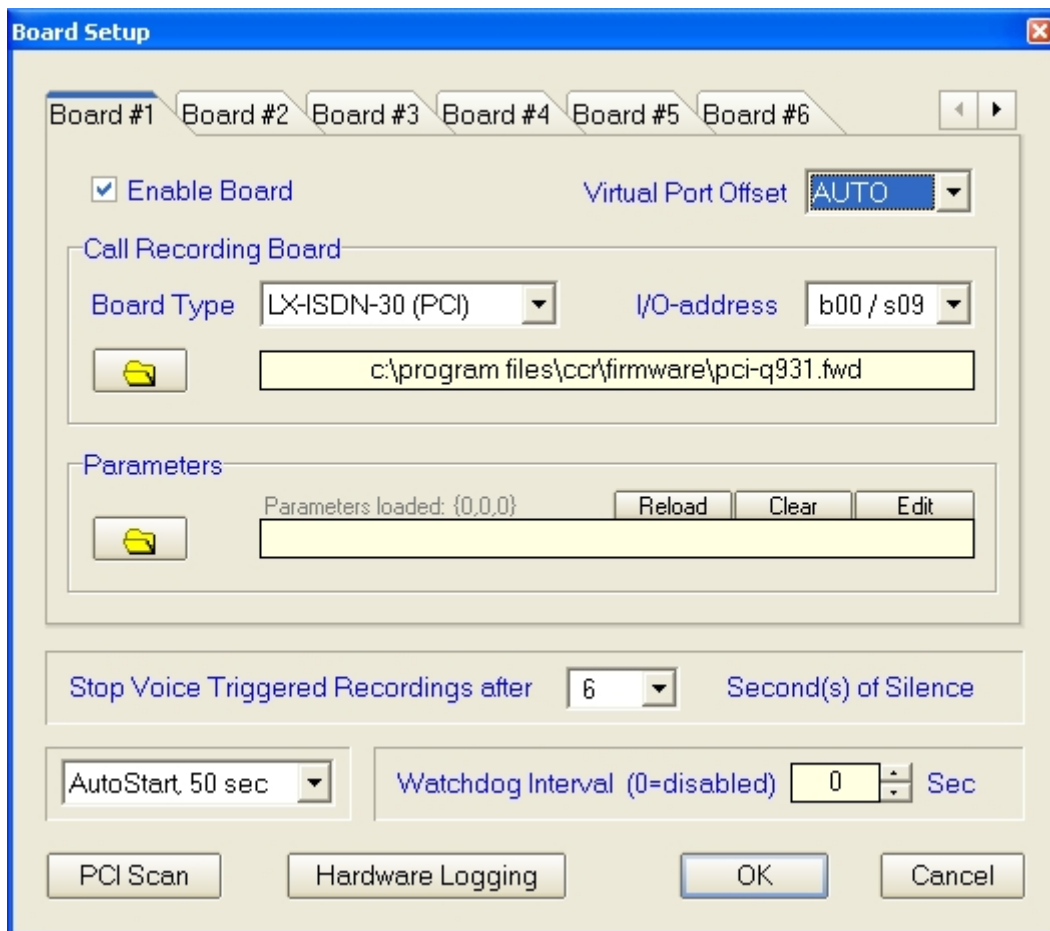
Although the [CallCatcher](#) system uses its system resources efficiently, it is not recommended to install and use other third party software that is CPU, harddisk, network or Operating System intensive. Most of the default Windows settings after installation of the CallCatcher and Windows Operating System will be sufficient for normal usage. In case network functionality is required please consult your systems administrator to configure the system properly on the Windows Operating System level.

Do not install a virus scanner on a CallCatcher system as it can affect harddisk performance as well as causing unpredictable behaviour.

As a safety precaution also make sure that file sharing is NOT enabled for any directory on your CallCatcher server.

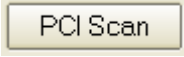
3. BOARD SETUP

Up to twelve different Voice Recording boards can be installed within a single [CallCatcher](#) configuration, provided the total number of ports does not exceed an amount of 256.




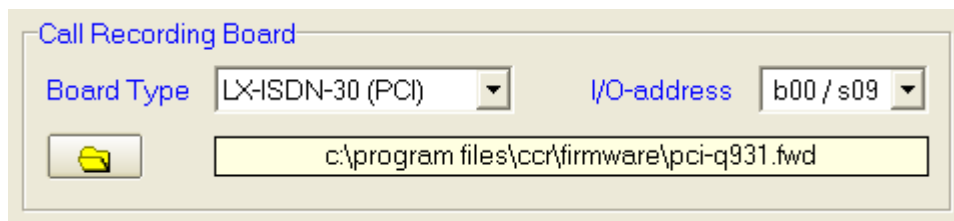
In the Board Setup window, each tab selection **#1** up to **#8** has the following properties for each of the eight cards:

'**Enable Board**' checkbox, this has to be checked to activate the selected board. The '**Board Type**' dropdown listbox specifies which type of Voice Recording board is to be used.

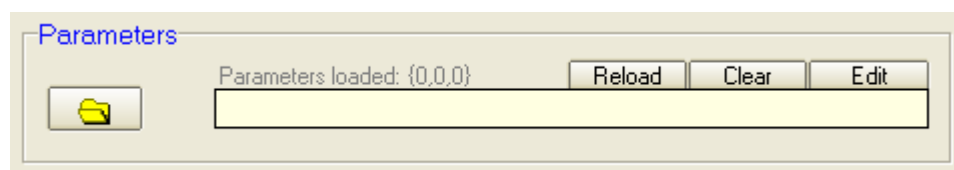
PCI boards must be installed by doing a  first. This will auto detect OptiLogix PCI cards. A list of available cards will be displayed of which the appropriate one can be selected. The detected hardware bus and slot number of the PCI card will be displayed in the '**PCI Bus/Slot**' pop-up box.



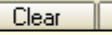
In case an ISA card is installed, an '**I/O-Address**' dropdown listbox is displayed and one of the available hexadecimal I/O board addresses must be selected according to the dipswitch settings on the ISA card.

 The '**Virtual Board Offset**' when set to AUTO will allocate boards sequentially. By specifying an offset, the specific board will be allocated from the specified port offset.



In the above '**Voice Recording Board**' panel, the yellow browse button selects the downloadable firmware file for the board, which is to be downloaded during the start-up phase of the CallCatcher. A firmware file must be selected. Consult the latest release notes and use the most recent software and firmware versions to achieve a successful installation or update of the product.



In the above '**Parameters**' panel, the yellow browse button selects which optional parameter file is to be used in conjunction with the specified board. The  button will open a parameter editor panel for advanced hardware related settings and will create a parameter file automatically. Using the  button a parameter file can be loaded during run-time. The  button will clear the parameter file path.

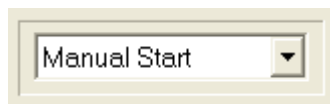
3.1 SPEECH ACTIVATED RECORDINGS

Configurations using analog speech and silence detection for starting and ending a voicerecording (VOX triggering) should configure the Silence detection dropdown listbox to configure the preferred silence timeout period. (Not required for digital configurations !)



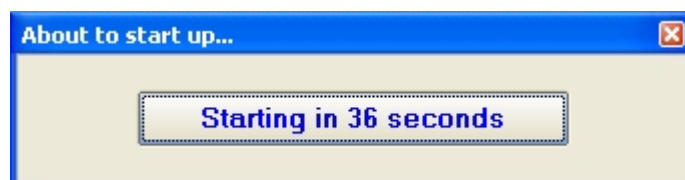
Selecting a value too low can result in the creation of multiple recordings for a single phone conversation. This is because a new recording will be started when silence is detected which exceeds the selected timeout period. A value too high could result in multiple phone conversations to be concatenated within a single recording.

3.2 AUTO-STARTING THE SYSTEM



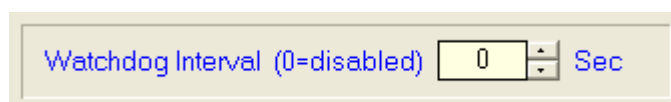
This dropdown box specifies if manual starting or automatic starting after N seconds is required.

During auto-starting of the system, the user always has the opportunity to cancel this by clicking on the countdown button.



3.3 WATCHDOG

A file based watchdog facility is available to signal third party programs that the CallCatcher is up and running. A file called "**watchdog.log**" is created when the interval is set to a value other than zero seconds. This text file contains a decimal number that increases every time the file is renewed (after the specified interval) as a result of having been deleted by the third party program.



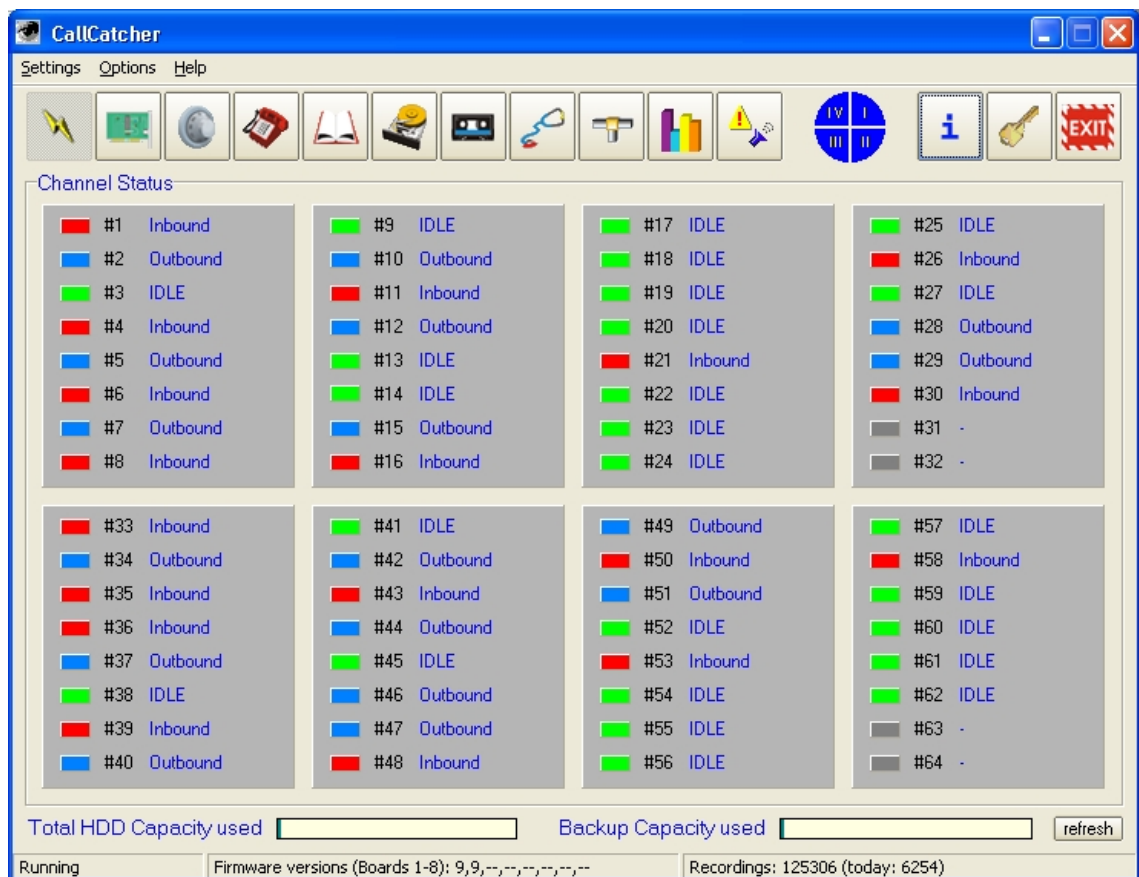
4. USING THE SYSTEM

After a successful installation you can start the program from the icon on your desktop, after which a tray icon will appear. Double click or right-click this tray icon to get the 'Log On' panel. When logged in for the first time, a warning will be issued that you are required to modify the user management settings. At this stage you have unrestricted access to the system. Refer to the 'User Management' chapter.

Note: The system uses **UTC** time (Universal Time Coordinated) to create date/time named directories for recording storage.








4.1 MAIN SCREEN

The main screen shows the status of all installed ports (channels). Non-available channels are greyed out.



4.1.1 Line Status Display

The main screen shows the systems activity status. Change of line status is shown as follows:

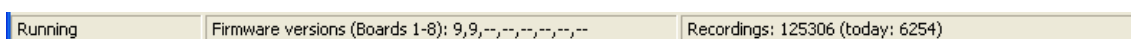
-  Idle state, no recording is made.
-  Idle state, no recording is made (Voice Activated mode).
-  Recording of an Outgoing call.
-  Recording of an Incoming call.
-  Recording of a Voice Activated call.
-  Channel not available.
-  Channel available but disabled.

Please note that a dark coloured status like dark Blue or dark Red shows that an outbound or inbound call is detected but that recording has not been started.

This either means that the detected call is not yet in a Connect state or it means for example that ports have been disabled or that the harddisk cannot be written to. Please check your [CallCatcher](#) configuration settings when all line state indicators remain dark coloured.

4.1.2 System Status Bar

The status bar shows the current status of the system.



When the system is started and the firmware is downloaded it will show the firmware release levels of each board installed. Also the total amount of recordings available is shown.

4.1.3 CallCatcher Speed-Buttons



The [CallCatcher](#) is started using this button or it will start automatically when configured to do so (see **Board Setup**).



This button will enable authorized users to close the program. Unauthorized users will not be able to terminate the program.



The information button will display the systems application software release level as well as the name of the current user.



This will enable any user to logout while keeping the system running. It is then required to login again to get access to the system.



This button will make a real-time listen toolbox appear which can be used at any time to listen in real-time to conversations on one of the selected ports.



Use this button to access the Board Setup window. This button is disabled when the CallCatcher is running.



Set system port properties on a per port basis or set all ports at once.



Access to User and Security Management.



Phonebook Entry access button.



Harddisk Management and Backup settings.



Click here to search for and listen to recordings.



Status overview of remote Network Clients that are logged in to the CallCatcher server.



View system and recordings statistics.



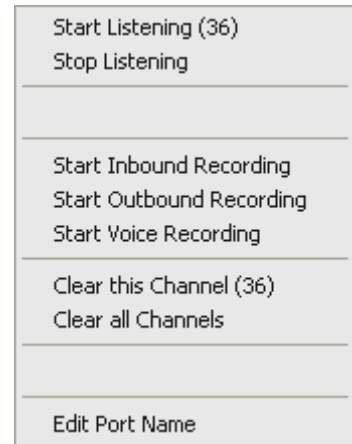
Alarm, E-mail, Field Replacement, Selective Deletion settings and Sound card settings.



Clicking on one of the four quadrants will show the line status of the other channels not visible on a single screen

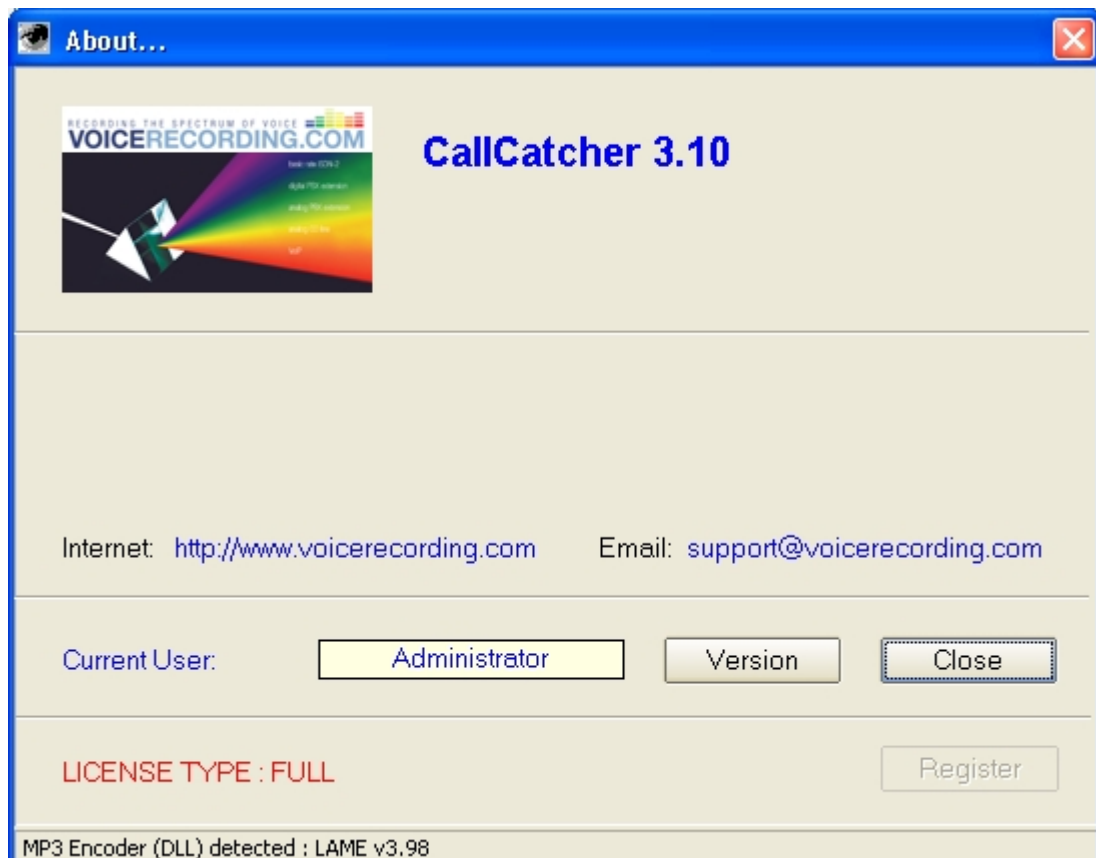
4.1.4 Line Status Options panel

Right clicking with the mouse on one of the line status 'LEDs' will make this options panel appear. Live monitoring of a channel can be started or stopped. A channel can be forced to start to record as being an inbound, outbound or voice activated call. In addition a channel (or all channels) being recorded can be cleared in order to stop these recordings in progress. Click on 'Edit Port Name' to change the name of the Port (this also can be programmed in the Port Settings configuration).



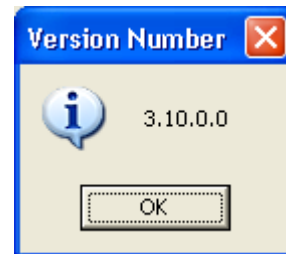
4.1.5 About panel

The 'About' panel is programmable and can display dealer/distributor specific information.

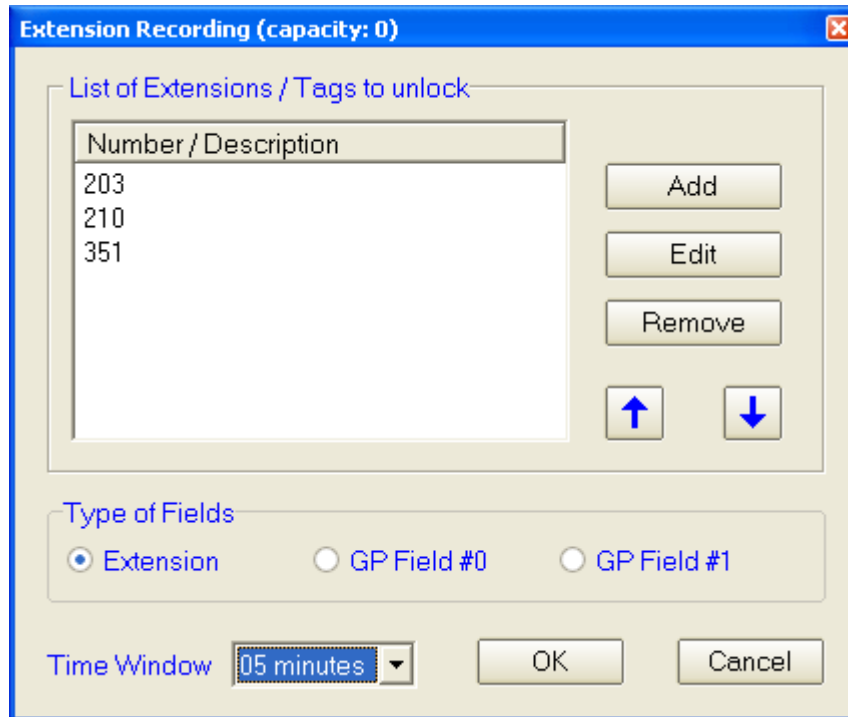


Using the **Register** button, a time limited license or a full license key code can be entered. By default a 60 day license is active after installing the CallCatcher software.

Click on **Version** for the full version number.



4.2 FRACTIONAL RECORDINGS SETTINGS



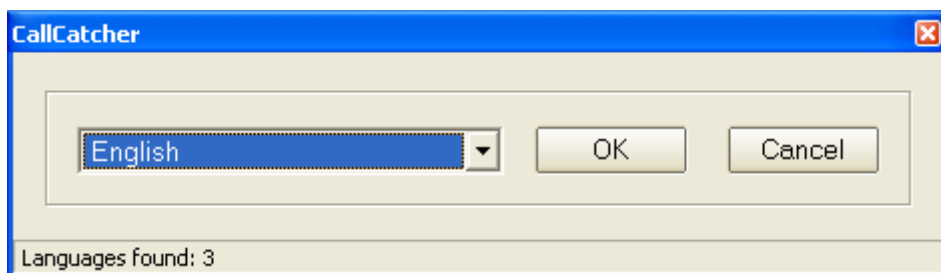
Certain type of board models that support license controlled fractional recordings must have the extensions to be unlocked configured in this configuration window. This is accessed through the main menu option: **Settings / Extension Recording**.

The first **N** amount (for which a license is available) of extensions that are configured in the above list will be automatically unlocked for audio playback as soon as the SMDR extension information is updated (and matches the list) in the CallCatcher.

4.3 LANGUAGE SUPPORT

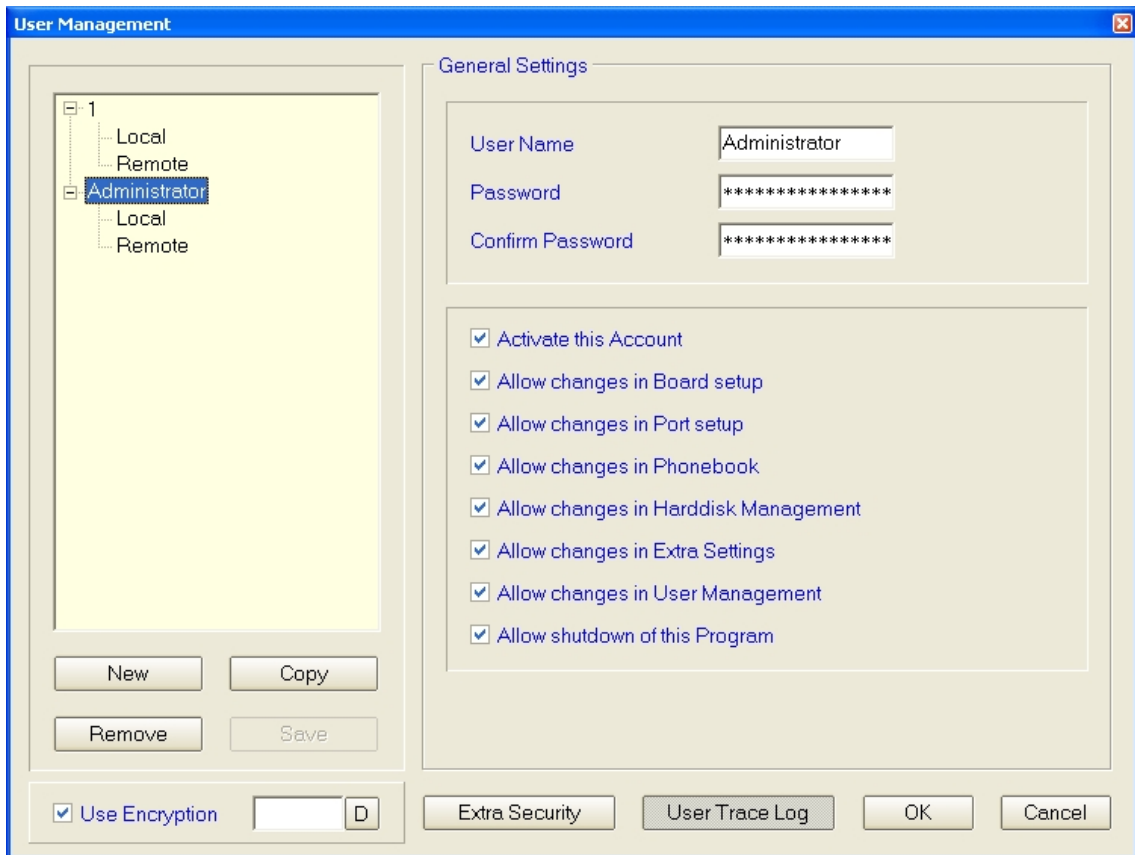
Support for multiple languages is available and can be selected in the panel shown below. This panel can be accessed through the main menu option: **'Settings' / 'Available Languages'**

Languages can be created and added. See the **.Ing** files in the **\Program Files\CCR** directory. Use an existing language, rename it (use a **.Ing** extension!) and modify it to suit your new language.



5. USER MANAGEMENT

An unlimited amount of users, each with their associated access rights, can be created here.



Using the **New** and **Remove** buttons, users can be created or removed. When the focus is on the User Name in the tree list, the right side of the view will show the global settings for editing. Click the **Save** button to confirm the changes made. Use **Copy** to copy settings while creating a new user at the same time.

Note: make sure the machine is connected to the local LAN to allow CallCatcher remote client software login.

5.1 EXTRA SECURITY

Use the **Extra Security** button to configure passwords for access to various Configuration / Setup screens. Please note that the password for accessing this for the first time is: **0000**

The screenshot shows a dialog box titled "Extra Security". It is divided into two main sections. The first section, "Password Extra Security", contains two text input fields: "Password" and "Verify Password", both of which contain four asterisks (****). The second section, "Passwords", contains four text input fields: "Board Setup" (****), "Port Setup" (empty), "Harddisk Setup" (*****), and "User Management" (empty). At the bottom of the dialog, there is a checkbox labeled "Show Passwords" which is currently unchecked, and two buttons labeled "OK" and "Cancel".

5.2 USER TRACE LOG

A trace can be created of all user activity regarding local and remote client access, playback of recordings and deletion of recordings.

These traces will be stored in "**Program Files\CCR\UserLogs**".

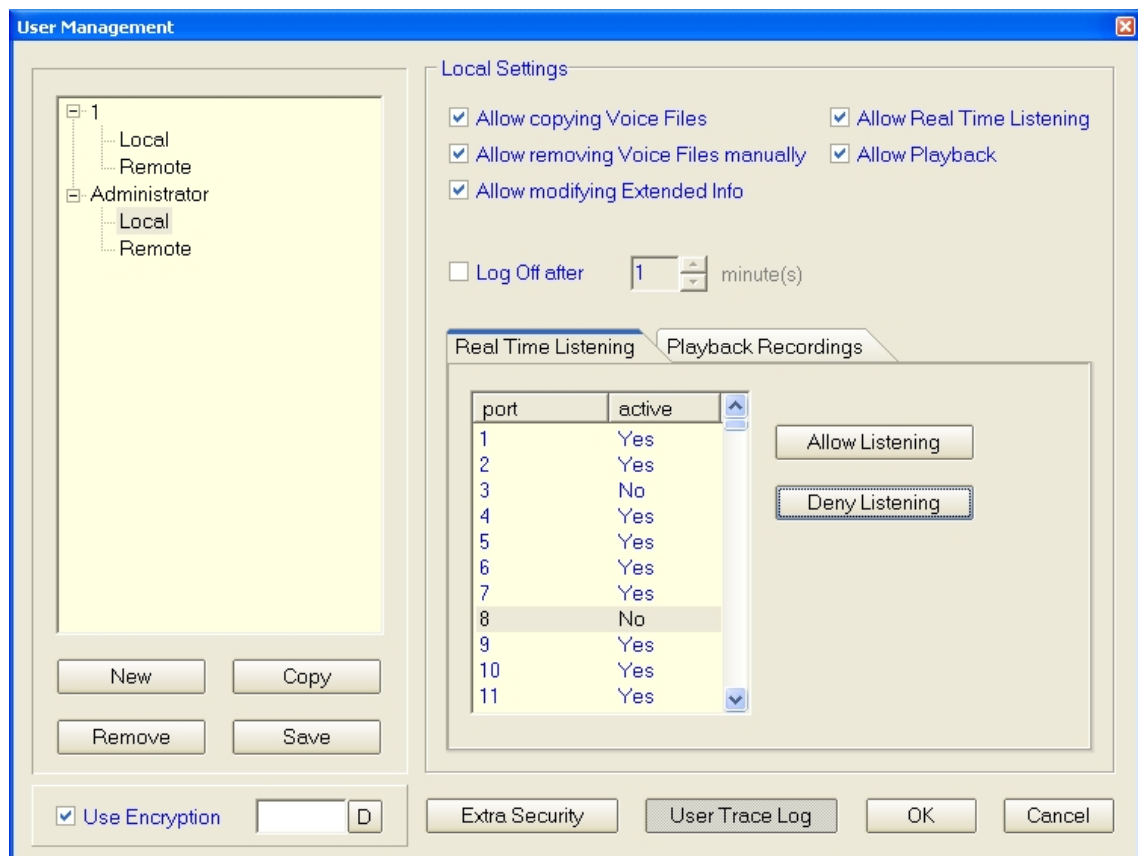
The filename format is: **YYYYMMDD.log**

A new ASCII text User Trace Log file will be created for each day.

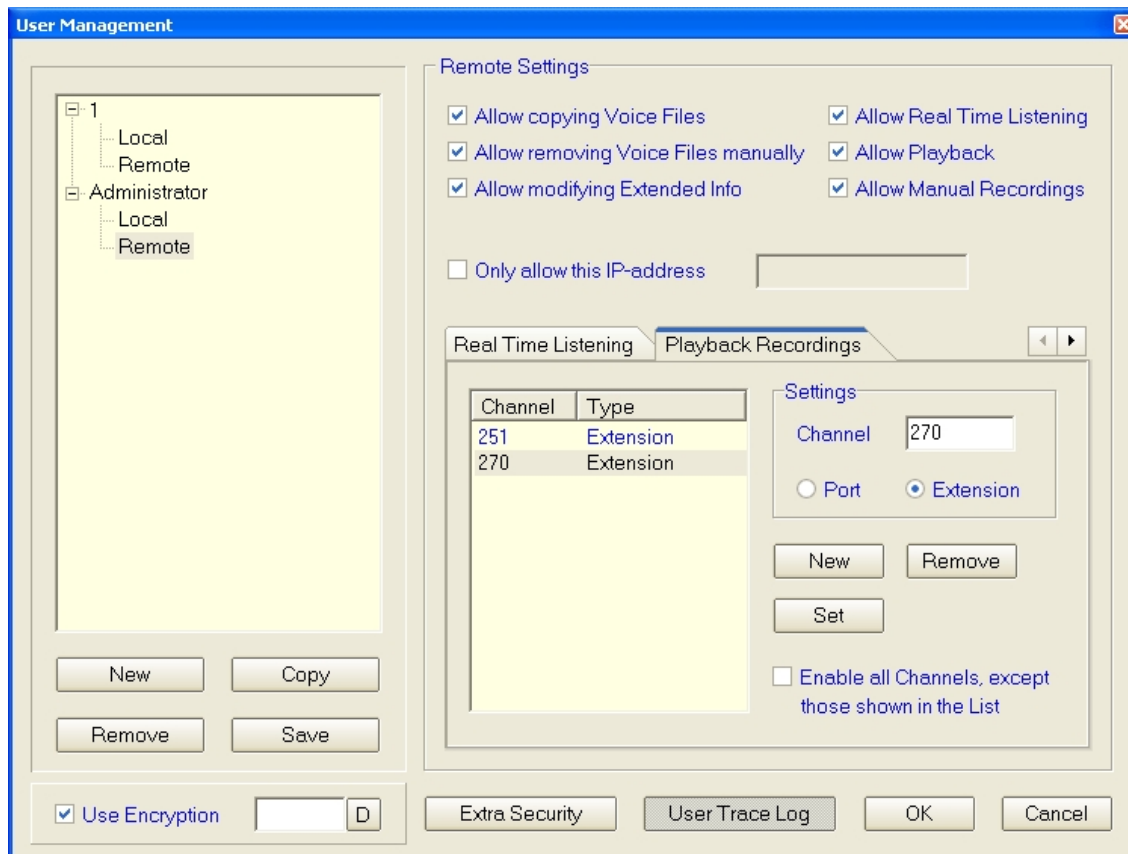
5.3 LOCAL AND REMOTE SETTINGS

The '**Local**' settings and the '**Remote**' settings can be accessed by putting focus on these nodes in the tree list.

These settings, which are further grouped using tabs, have various checkboxes and lists available to change individual access rights. The names of these checkboxes are sufficiently explanatory and present the access rights to various parts of the [CallCatcher](#) environment. In addition to this, a list of ports and / or extensions can be specified which should be included or excluded from having access to by a specific user.



An IP address of a client application like the [CallPlayer](#) can be specified optionally in case it is required to bind the user to, not only his personal user name and password, but also to his own workstation IP address (see next screen).

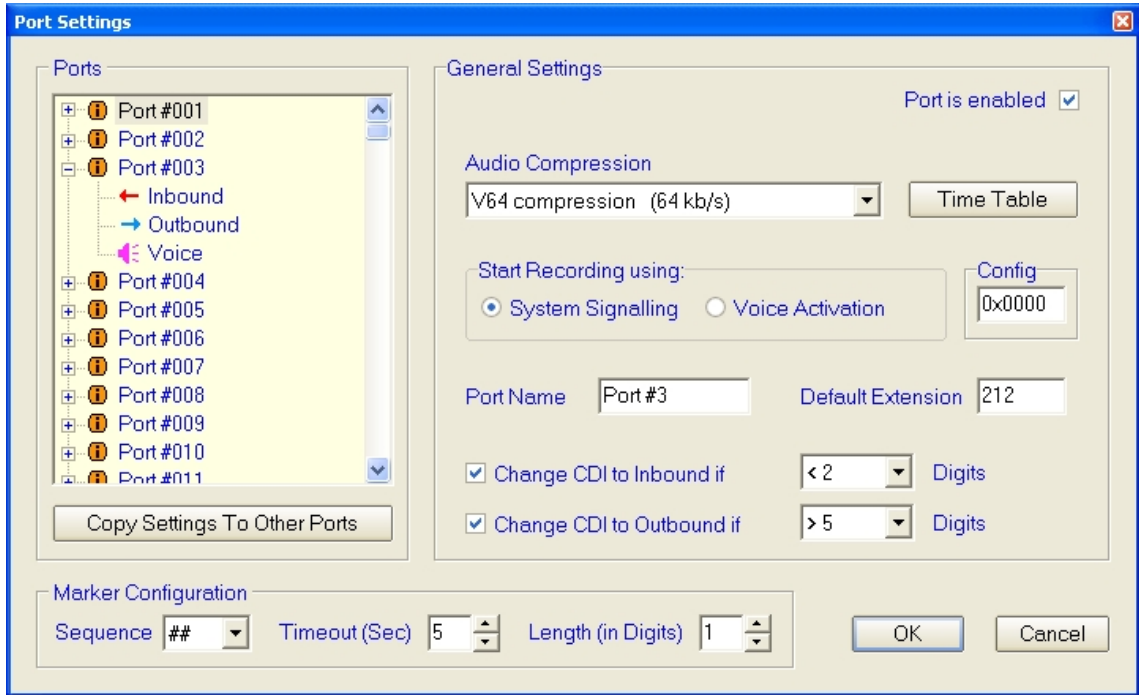


Entering a **'Channel'** number and selecting the type (**'Port'** or **'Extension'**) followed by clicking on the **New** button will program the setting. The **Clear** button will remove the focused entry in the list and will clear the editbox. The **Set** button allows for updating a list entry without creating a new one.

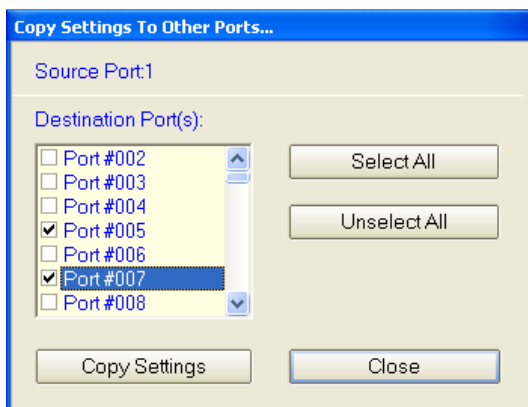
5.3.1 Encryption

When the **'Use Encryption'** checkbox is checked, the **CallCatcher** will use a default encryption key to store recordings on disk. Entering a random number in the editbox will **'personalize'** the encryption key and all new recorded voice files on the disk will be unreadable for other **CallCatcher** systems that do not have the same encryption key programmed. When unchecked, the files will not be encrypted and will be readable by most commercially available audio player programs.

6. PROPERTIES PORT



Depending on how the [CallCatcher](#) is interfaced to the corporate telephone infrastructure, each port will either represent a CO line, a PBX extension or a mix of both.



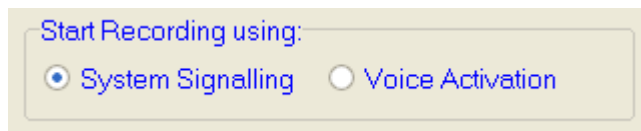
A specific port setting can be copied to all or a selection of other ports by clicking on the **Copy Settings To Other Ports** button which will make this panel appear. Make sure the focus is on the port that must be copied.

6.1 GENERAL SETTINGS

6.1.1 Audio Compression

The '**Audio Compression**' property allows to select a proprietary 36 kbit/s compression mode that gives almost the same high 64 kbit/s quality at about half the file size. Higher compression rates of 16kbit/s and 8kbit/s are selectable in the '**Harddisk Management**' settings.

6.1.2 Connection to CO (External) Lines



In most situations the hardware that is connected to CO lines will have support for analog line

signalling or Digital ISDN type of signalling. The '**System Signalling**' radio button is then to be selected.

6.1.3 Connection to Extensions

Ports can be connected to internal extensions as well. Some important considerations are to be taken into account:

- A [CallCatcher](#) port is connected to the telephone handset just like it is connected to an analog CO line. The handset should be of an analog type in which case there are two possibilities:
 - The telephone handset is a standard POTS device with support for a high voltage ringing signal, in which case the line-current activation option is to be selected and where a differentiation can be made between incoming- and outgoing calls.
 - The telephone handset is a non standard device (usually 4 wire) which receives ringing as an audio signal, in which case line-current activation can be an option, but where there is no differentiation possible between incoming and outgoing calls.

- A **CallCatcher** port is connected to a proprietary PBX specific digital telephone handset. Digital Extension interfaces are required for this.

'System Signalling' must be selected for Digital Extension firmware that supports CLI/DDI (D-channel protocol). **'Voice Activation'** must be selected for firmware that does not support CLI/DDI.

- A **CallCatcher** port is connected to the speaker wire pair of a digital handset, in which case it is effectively connected to a combined analog audio source of this handset. A small T-split adapter will be required and the **'Voice Activation'** radio button should be selected. In this situation it is not possible to differentiate between incoming and outgoing calls. Analog port interfaces are required in this case.

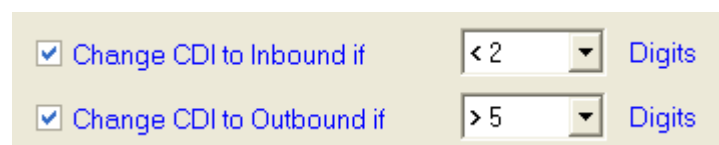
6.1.4 Port Name



The screenshot shows two input fields on a light beige background. The first field is labeled 'Port Name' and contains the text 'Port 3'. The second field is labeled 'Default Extension' and contains the number '3130'.

A **Port Name** can be specified which will be displayed on the main status screen as a static text. The **'Default Extension'** will appear in the **'Extension'** column of the recordings list in the **'Monitor'** screen.

6.1.5 Change CDI (Call Direction Information)



The screenshot shows two configuration options on a light beige background. The first option is 'Change CDI to Inbound if' with a checked checkbox, a dropdown menu set to '< 2', and the word 'Digits' to its right. The second option is 'Change CDI to Outbound if' with a checked checkbox, a dropdown menu set to '> 5', and the word 'Digits' to its right.

Recording channels that only support DTMF detection and no line signalling (voice activated channels for example), can have their Call Direction Information (CDI) changed based on the total amount of DTMF digits detected.

6.1.6 Time Table Controlled Recording

The **Time Table** button gives access to the following panel:



The screenshot shows a dialog box titled "Time Table" with a close button (X) in the top right corner. The dialog is organized into seven columns, one for each day of the week: Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, and Saturday. Each column contains two time selection dropdown menus (00:00 and 23:59), a "Within" button, and an "Outside" button. Below these columns, there is a "Force Recording" dropdown menu currently set to "None". To the left of the "Force Recording" dropdown is a checkbox labeled "Enable Time Table" which is checked. At the bottom right of the dialog are "OK" and "Cancel" buttons.

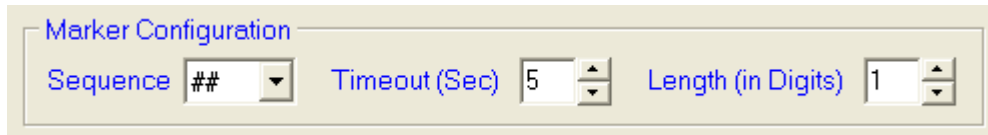
When the '**Enable Time Table**' checkbox is checked, then on a per daily basis, a selection can be made to enable recordings within a selected time period or outside a selected time period.

This timetable is available for all the individual [CallCatcher](#) ports.

Using '**Force Recording**' it is possible to automatically start and stop recordings based on this Time Table. Combined with the segmented recording feature it can be used to record audio from television or radio broadcasts.

6.1.7 Marker Configuration

Markers can be set while a call is in progress or when a call is ended to make the search for recordings easier at a later stage. Markers will be included in the header of the recording. Markers are only recognized as DTMF digits in analog port configurations.



Marker Configuration

Sequence Timeout (Sec) Length (in Digits)

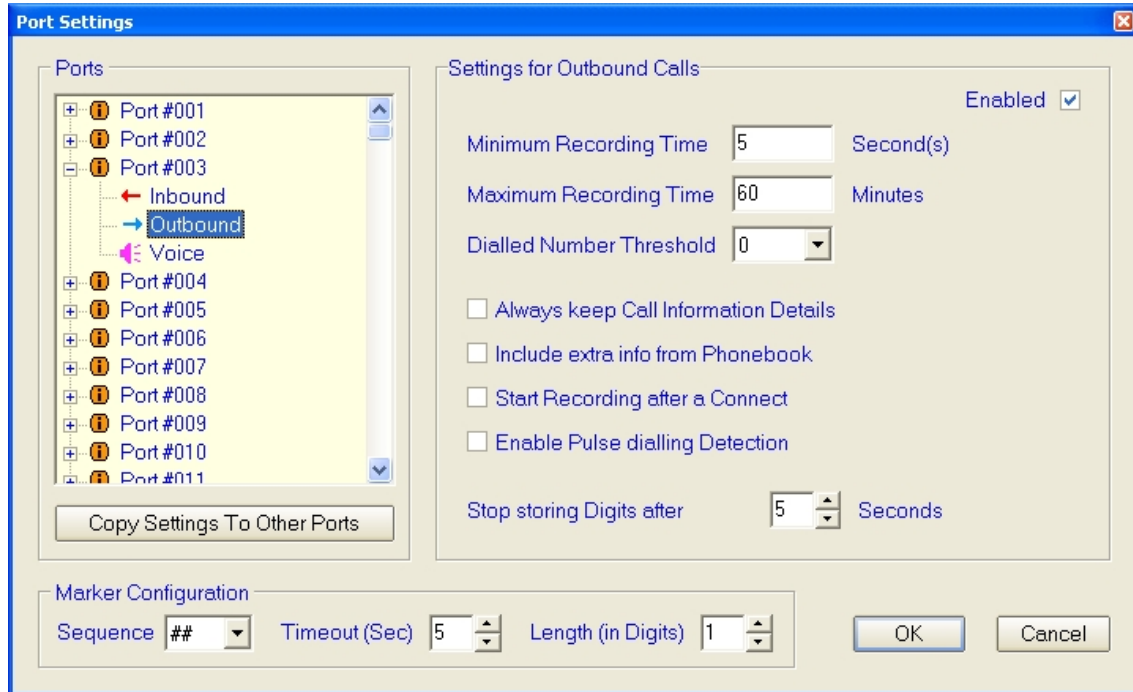
6.1.7.1 Prefix Sequence

A special 2-digit prefix sequence can be selected as well as the **Length** of the marker itself (1 up to 6 digits following the prefix). Related to the Marker Configuration is the **Timeout** value. This defines the time window (in seconds) in which the complete marker sequence must have been detected before it will be accepted as a valid marker.

6.1.7.2 Marker usage

Once a marker is configured, then at the start of a call or during the call or eventually at the end of the call, a marker (for example ##123) can be entered on the keypad of the telephone handset. This marker will appear in the Marker column of the '**Monitor**' screen and it can be searched for when looking for specific recordings.

6.2 OUTBOUND SETTINGS



6.2.1 Min / Max Recording Time

When enabled, it is possible to enter the '**Minimum Recording Time**' duration in seconds for which a call must have lasted before the recording is actually saved. Please note that the recording itself is started immediately and not delayed. The '**Maximum Recording Time**' limit in minutes will put a maximum limit to the recording time. If a negative value is entered like **-60** it will record forever but will create segmented recordings with a length of 60 minutes each.

6.2.2 Dialled Number Threshold

Dialled Number Threshold For outgoing calls the minimum number of digits to be dialled, before a recording is saved, can be selected as well. Therefore, when the digit threshold is not reached (the dialled number has not enough digits) the recording which has started will be rejected afterwards.

6.2.3 *Keep Call Information Details*

[Always keep Call Information Details](#) When checked, incomplete calls like Busy, No Answer, wrong/incomplete Dialed Number and recordings that are too short (voice file not being created), will get a 'header only' file that contains Call Information Details only and no voicerecording.

6.2.4 *Phonebook Data inclusion*

[Include extra info from Phonebook](#) This checkbox will attach data from the Phonebook to the voicerecording file. This data can contain descriptive information in relation to the dialled telephone number (DDI) or the received Caller-Line-Identification (CLI) number.

6.2.5 *Enable Pulse dialling Detection*



[Enable Pulse dialling Detection](#) For analog line interfaces, pulse dialling detection can be enabled.

6.2.6 *Start Recording after a Connect*

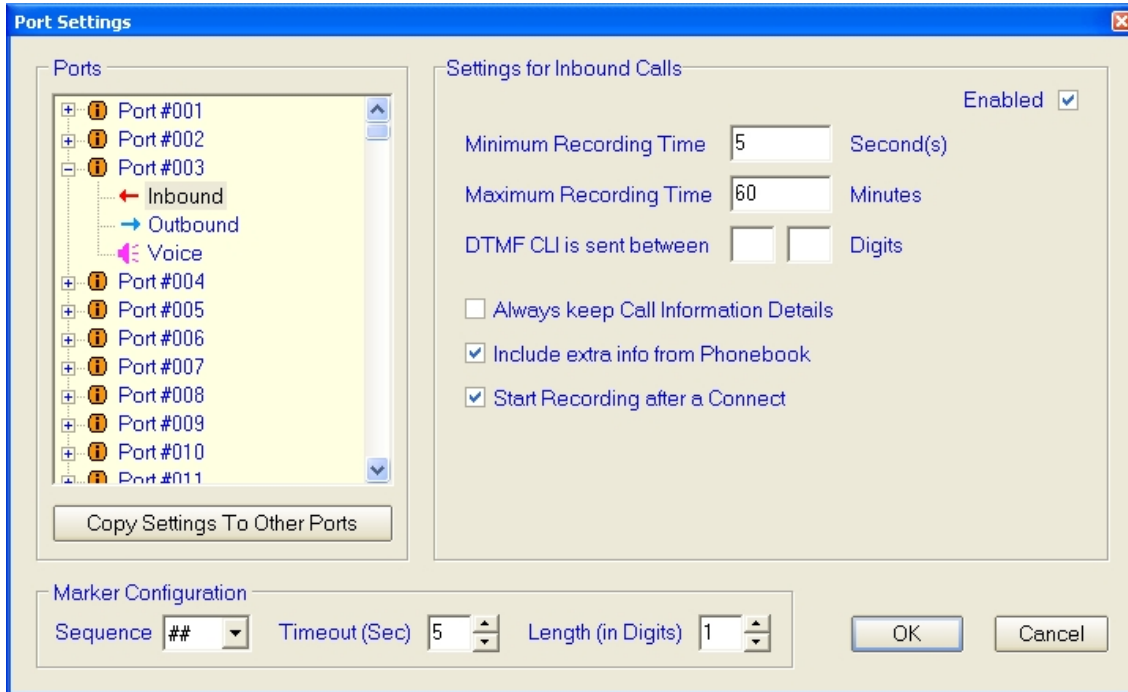
[Start Recording after a Connect](#) When using digital interfaces that support signalling protocols, it is possible to only start a recording when the call is answered.

6.2.7 *Digit Storage Timeout*

A dialling digit storage timeout period (in seconds) can be set to stop further storage of detected digits. This is very helpful to prevent digits being stored as dialled numbers when, for example, these digits are detected while a caller is entering digits to navigate a voicemail system.

[Stop storing Digits after](#)   [Seconds](#)

6.3 INBOUND SETTINGS



6.3.1 Min / Max Recording Time

When enabled, it is possible to enter the ‘**Minimum Recording Time**’ duration in seconds for which a call must have lasted before the recording is actually saved. Please note that the recording itself is started immediately and not delayed. The ‘**Maximum Recording Time**’ limit in minutes will put a maximum limit to the recording time. If a negative value is entered like **-60** it will record forever but will create segmented recordings with a length of 60 minutes each.

6.3.2 DTMF CLI

DTMF CLI is sent between **Digits** When using analog line interface cards on analog lines that support DTMF based CLI, a prefix and termination DTMF (including digits A,B,C and D) can be specified to enable CLI extraction.

6.3.3 *Keep Call Information Details*

Always keep Call Information Details When checked, incomplete calls like Busy, No Answer, wrong/incomplete Dialed Number and recordings that are too short (voice file not being created), will get a 'header only' file that contains Call Information Details only and no voicerecording.

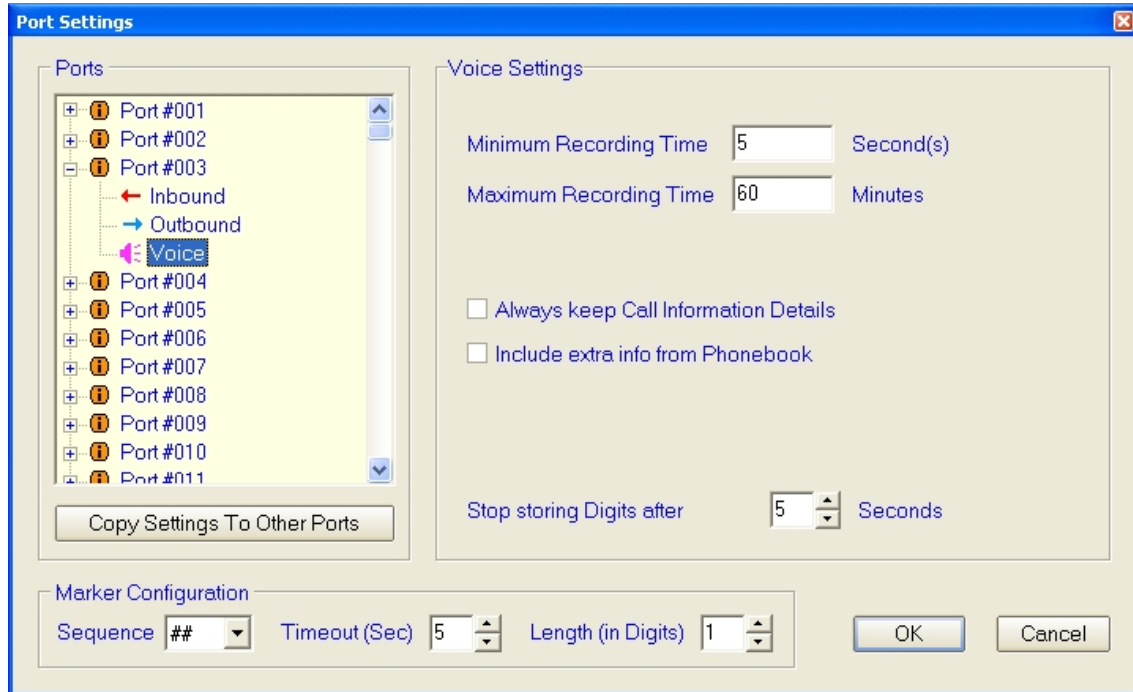
6.3.4 *Phonebook Data inclusion*

Include extra info from Phonebook This checkbox will attach data from the Phonebook to the voicerecording file. This data can contain descriptive information in relation to the dialled telephone number (DDI) or the received Caller-Line-Identification (CLI) number.

6.3.5 *Start Recording after a Connect*

Start Recording after a Connect When using digital interfaces that support signalling protocols, it is possible to only start a recording when the call is answered.

6.4 VOICE SETTINGS



6.4.1 Min / Max Recording Time

When enabled, it is possible to enter the '**Minimum Recording Time**' duration in seconds for which a call must have lasted before the recording is actually saved. Please note that the recording itself is started immediately and not delayed. The '**Maximum Recording Time**' limit in minutes will put a maximum limit to the recording time. If a negative value is entered like **-60** it will record forever but will create segmented recordings with a length of 60 minutes each.

6.4.2 Keep Call Information Details

Always keep Call Information Details

When checked, incomplete calls like Busy, No Answer, wrong/incomplete Dialed Number and recordings that are too short (voice file not being created), will get a 'header only' file that contains Call Information Details only and no voicerecording.

6.4.3 Phonebook Data Inclusion

Include extra info from Phonebook

This checkbox will attach data from the Phonebook to the voice-recording file. This data can contain descriptive information in relation to the dialled telephone number (DDI) or the received Caller-Line-Identification (CLI) number.

6.4.4 Digit Storage Timeout

A dialling digit storage timeout period (in seconds) can be set to stop further

Stop storing Digits after

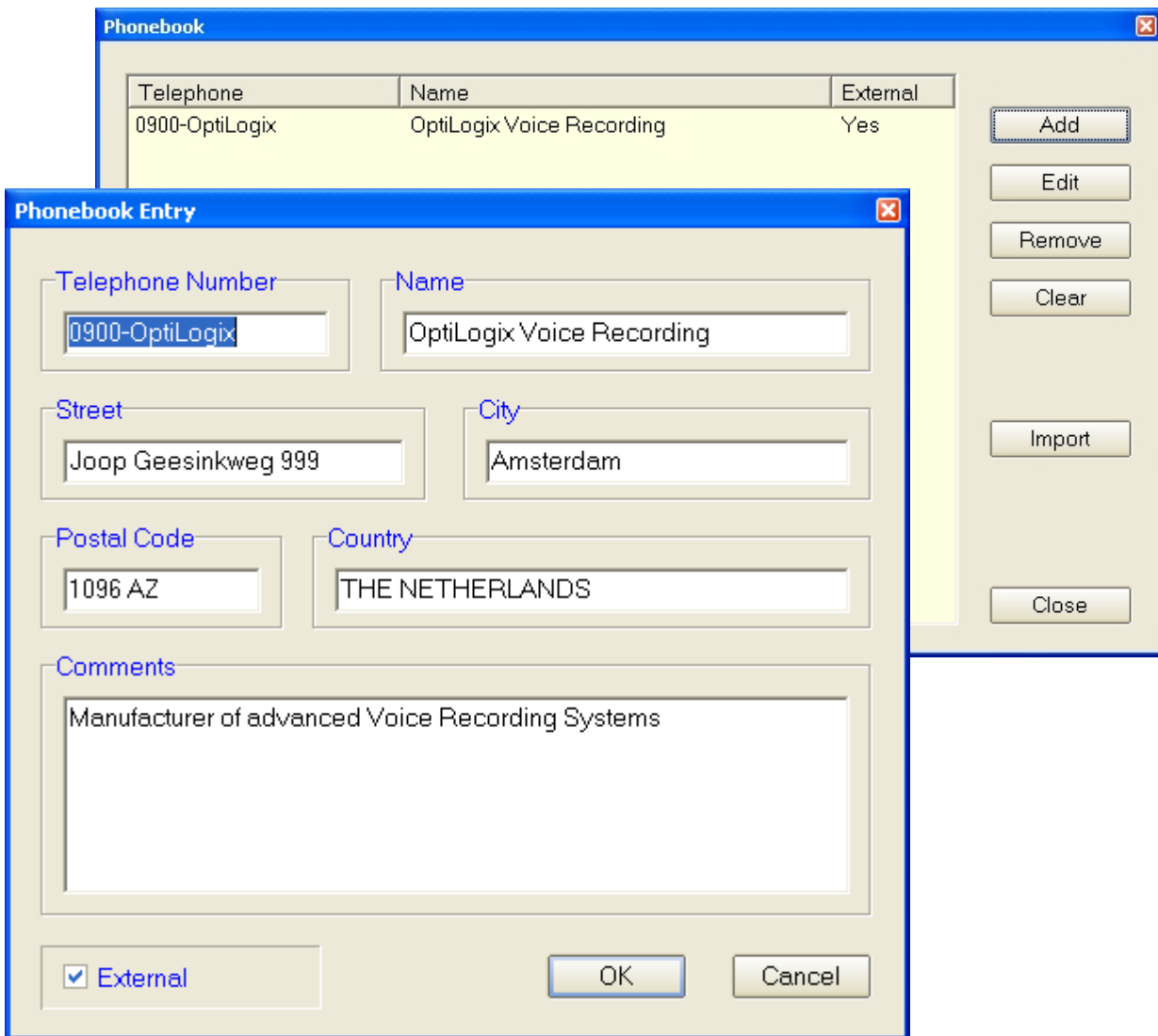
5

Seconds

storage of detected digits. This is very helpful to prevent digits being stored as dialled numbers when, for example, these digits are detected while a caller is entering digits to navigate a voicemail system.

7. PHONEBOOK ENTRY

This view shows a list of all Phonebook entries available in the systems database. Adding, editing, removing as well as importing a CSV (Comma Separated Value) file are supported.



7.1 ENTERING PHONEBOOK DATA

Telephone number, Name, Street, City, ZIP code, Country and Comments can be stored. This call specific information will be displayed in the '**Monitor**' screen when a recorded dialled number or Caller-ID number matches the '**Telephone Number**' field.

7.2 IMPORTING EXTERNAL DATA

An external data file with a list of Phonebook entries can be imported using the **Import** button. The format of the data file is in CSV format that has all seven data-fields separated by six commas as shown below:

TelNo,Name,Street,City,ZIPcode,Country,Comments

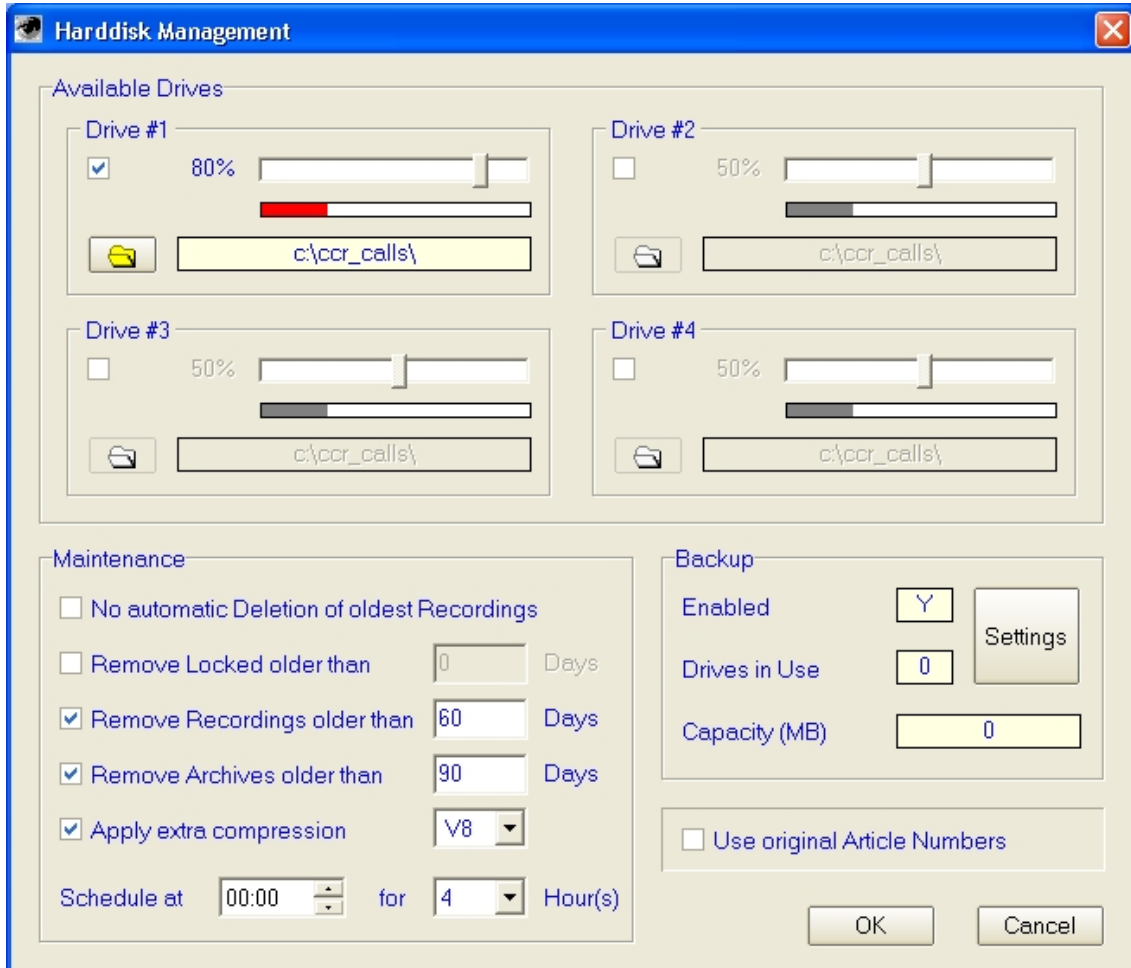
7.3 MERGING EXTERNAL 'LIVE' DATA

It is possible to have external live data merged into the Phonebook. This data should be in CSV format in a file named '**ExtBook.phb**'.

This file is checked every minute for changes. If changed it will be merged into the Phonebook. Please note that this external 'live' data is volatile. It will not be saved by CallCatcher. Only data explicitly imported using the **Import** button will be saved internally (in a file named '**PhBook.phb**'). Therefore external 'live' data will be merged only while the external file '**ExtBook.phb**' exists in the '**\Program Files\CCR**' directory.

External 'live' data can be made 'local' by unchecking the '**External**' checkbox in the '**Phonebook Entry**' panel. In this way this particular entry will become non-volatile and stored in '**PhBook.phb**' when the application is closed.

8. HARDDISK MANAGEMENT



Up to four harddisk drives are supported for voicerecording storage. The system will treat multiple harddisks as one combined large logical storage space.

Every physical disk can be assigned a directory path in which the voicerecordings are stored.

The current used disk space of a selected harddisk is shown by a red coloured bar-graph. Typically the manual slider must be set in such a way that it does not fall within the red area of the bar-graph.

For each hddisk the maximum allowable storage space (percentage of the disk size) and the directory path, in which every individual recording will be stored, must be specified. In case all enabled hddisks reach their maximum capacity then the oldest files will be erased automatically to create room for new recordings.

Before being erased completely (header + voice content) or only the voice content itself, the files can be automatically backed-up by the CallCatcher. The backup drive must be a logical drive and can physically reside on the local machine or on a machine on the Local Area Network (LAN).

8.1 REMOVE RECORDINGS AUTOMATICALLY

It is possible to have recordings older than a certain number of days to be removed automatically. When a recording is removed, its archive (header) is kept and the voice contents (the actual voicerecording) is deleted. Archives remain visible in the [CallCatcher](#) recording database and can be removed automatically as well after a number of days.



The screenshot shows a 'Maintenance' settings window with the following options:

- No automatic Deletion of oldest Recordings
- Remove Locked older than Days
- Remove Recordings older than Days
- Remove Archives older than Days
- Apply extra compression
- Schedule at for Hour(s)

The checkbox '**No automatic Deletion of oldest Recordings**' when enabled will prevent old recordings from being removed when the storage capacity is exceeded. This means that new recordings will not be created (CallCatcher will stop writing recordings to disk).

'**Remove Locked older than**' will delete recordings so many days after they have been permanently locked. This only applies to systems using fractional recording boards.

Recordings older than **N** days can be automatically deleted. Only the voice content itself will be deleted, but the header (archive) will not be deleted and will stay visible in the list of recordings.

Archives (header without voice content) older than **X** days can be deleted as well. In this case the complete file will be removed from the system.

Warning: Files that are deleted cannot be recovered anymore !

The [CallCatcher](#) will do an automatic maintenance check on a daily basis during which the system is checked for missing files, empty directories and recordings/archives to be removed. Also during this maintenance check, recordings can have extra compression applied to it (V16 and V8 formats for 16kbit/s and 8kbit/s respectively).

8.2 ARTICLE NUMBERS

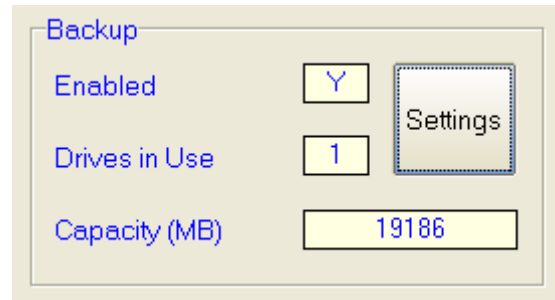
[Use original Article Numbers](#)

Recordings have article numbers that can be referred to by (third party) CallCatcher client applications. Specific applications that need consistent article numbers associated with the voicerecordings on disk, should have this checkbox set. When the CallCatcher is started-up, it will then use the article numbers embedded in the header of the recording. Otherwise new article numbers will be assigned starting from 0 .. N-1.

In stand alone operation or when using remote clients like [CallLive](#), [CallMonitor](#), [CallPlayer](#), [CallAgent](#), [CallLink](#) and [CallExport](#) it does not matter if this checkbox is set or cleared.

8.3 BACKUP

The creation of automatic backups is supported by the [CallCatcher](#) and can be configured for various types of backup media, time schedules, decision rules and multiple backup targets.

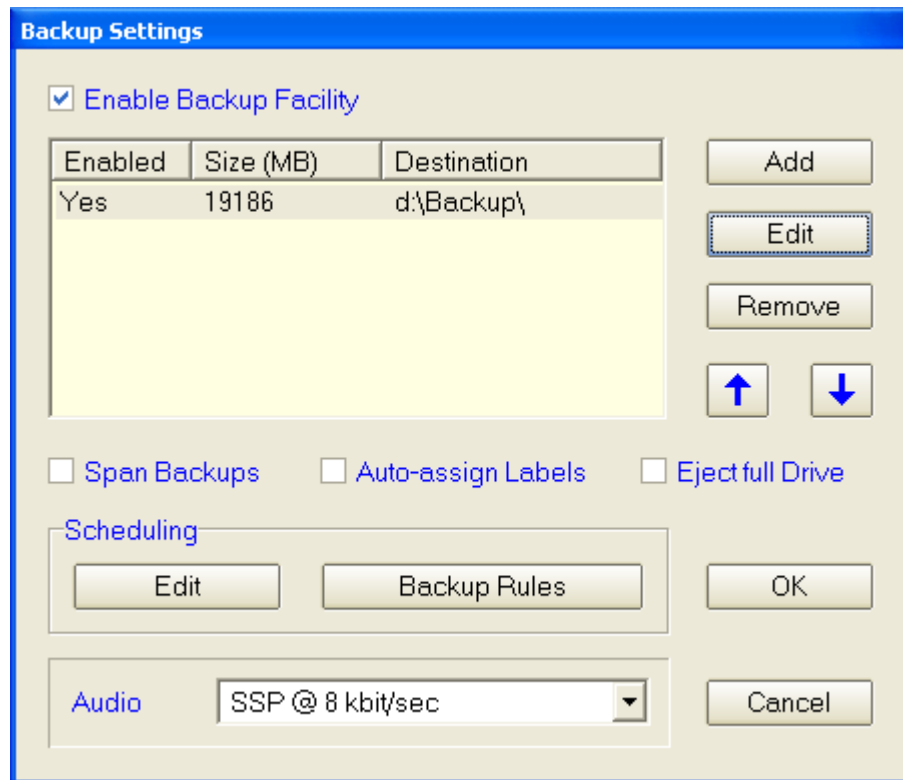


Backup	
Enabled	<input type="text" value="Y"/> <input type="button" value="Settings"/>
Drives in Use	<input type="text" value="1"/>
Capacity (MB)	<input type="text" value="19186"/>

When a voicerecording file is being backed up, it will be stored unaltered on the target drive (all backup media should be configured to be accessible as a logical drive). On the source drive the recording will not be deleted (configurable). The header will be modified in order to show a '**B**' (backup) flag in the list of recordings.

This modified header (with preserved original voice content) contains all original header data and some new data regarding the backup process that was applied to the original recording (date of backup and name of the backup medium).

8.3.1 Backup Settings



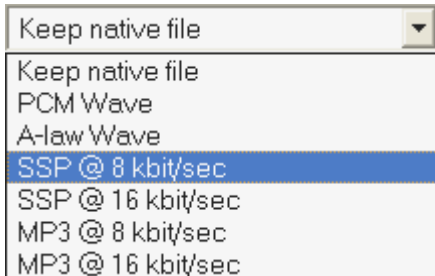
Multiple backup target drives can be configured. The sequence at which these are accessed can be programmed using the up and down arrow buttons.

'**Span Backups**' will create duplicate backups simultaneously to all the available backup targets. If one of the targets is full, the backup procedure will stop.

A backup time schedule can be accessed with the **Edit** button. It is recommended that backups are being scheduled for non busy periods in which not many recordings are made.

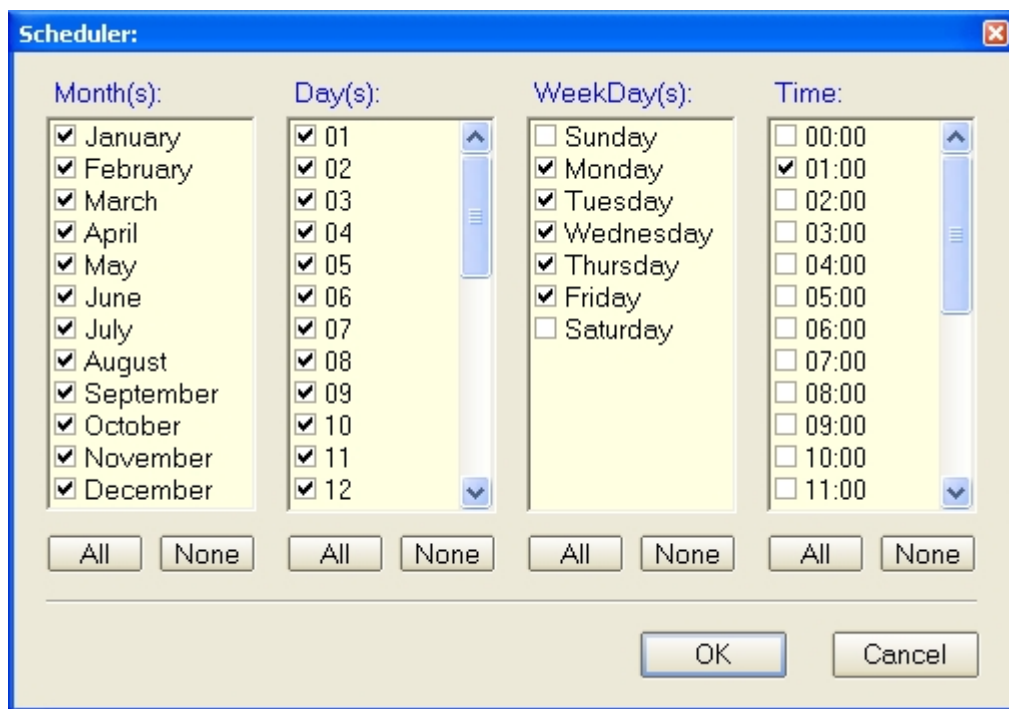
This is typically recommended in case speech compression is done during the backup process (16kbit/sec and 8kbit/sec native .SSP or .MP3 formats) as this will cause additional CPU loading.

Cache files will be created in order to speed-up the scanning of backup directories by for example CallPlayer in 'Local View' mode.

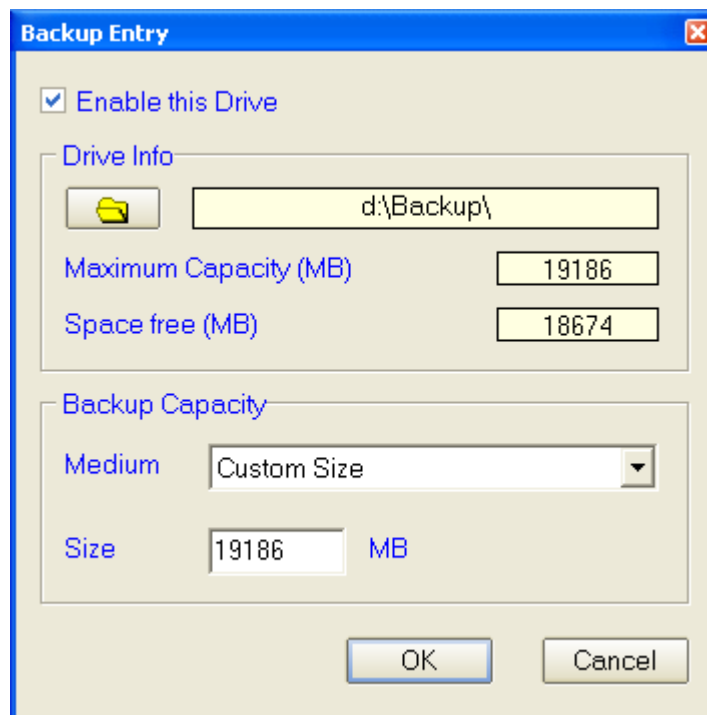


Using the 'Audio' dropdown box the file format and compression can be selected. Please note that only native files (.SSP formats) are encrypted, contain full header information details and can be read in 'Local View' mode by [CallPlayer](#).

The moment at which backups are being made can be configured using the scheduling table as shown below:



Alternatively using 'Start / Stop Backup Now!' from the pull down menu in the main screen of the CallCatcher it is possible to manually start or stop the backup process.

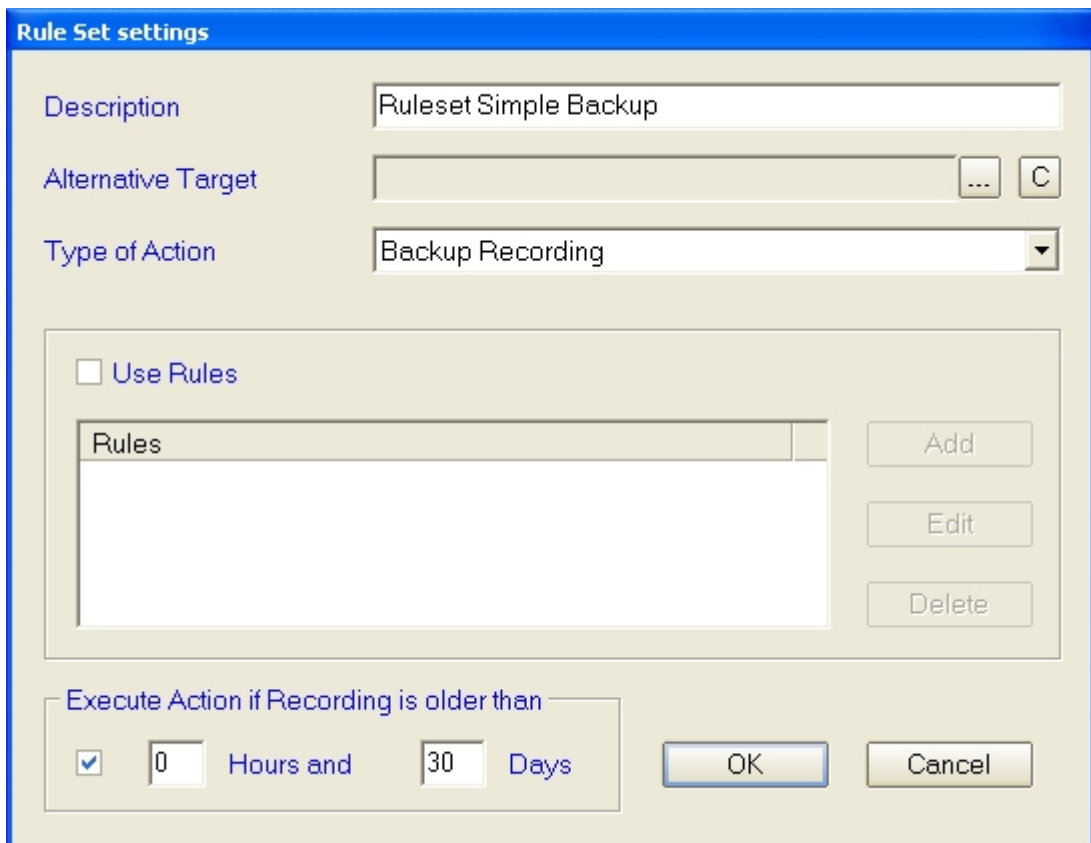
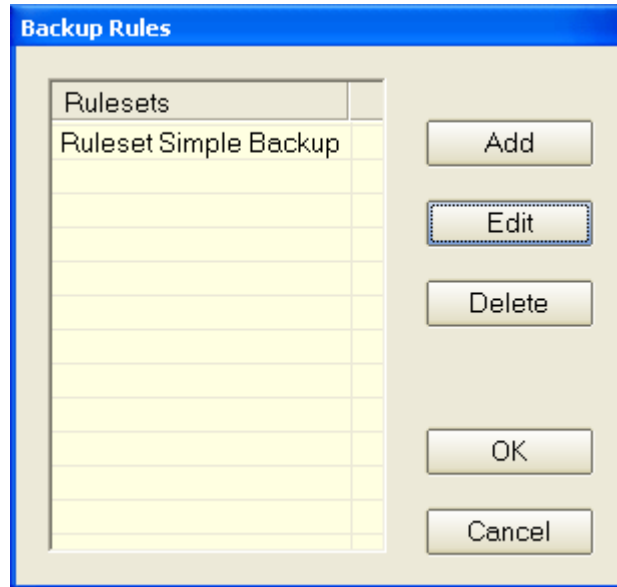


For each backup target drive, the maximum size can be specified. Some presets are available under the dropdown box '**Medium**'.

Using '**Enable this Drive**' a backup target can temporarily be disabled while maintaining all settings for that backup target.

The **Backup Rules** button gives access to the '**Backup Rules**' section in which, for regular (non rule based) backup purposes, it is required to create a single backup rule in which the age of the recording is specified (in Hours and Days). Voicerecordings that are older than this programmed age will then become part of the backup process.

An example is shown on the next page that will create backups if recordings are older than 30 days and 0 hours:

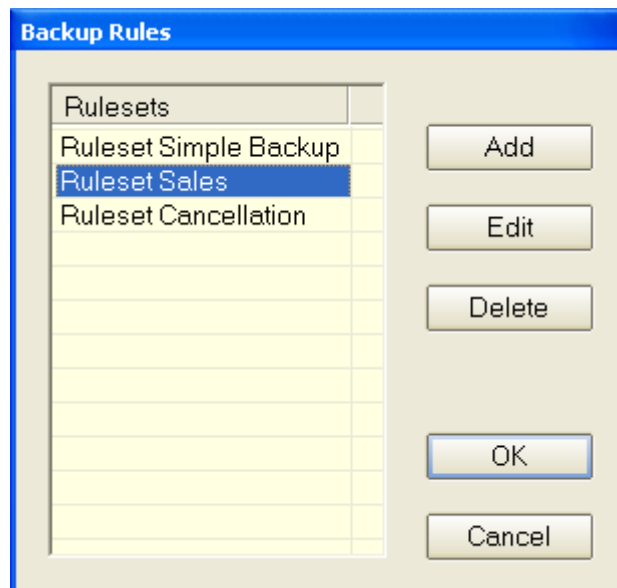


8.3.2 Rule Based Backup

Backups can be made to different targets on the basis of predefined rules like specific DDI / CLI numbers, extension numbers, contents of marker / remarks field.

Multiple rulesets can be programmed. Please note that the rulesets programmed will define on what basis a specific recording must be backedup. This means that when the criteria of a specific ruleset are met, the action specified will be executed and next rulesets will not be checked anymore against the specific recording.

Similar rulesets will therefore not cause multiple backups being made of the same recording. If backup mirroring is required use the '**Span Backups**' checkbox.



8.3.3 Rule Set

Each ruleset consist of:

- Optional list of rules.
- Optional alternative directory path for storing backups.
- Optional age specifier (Hours and Days).
- Type of action to be taken.

A list of rules can be created using the **Add** button. Each rule will be an AND function among all the other rules in the list and will be the outcome of comparing ('**Action**') a '**Field**' with a '**Value**'.

The screenshot shows a dialog box titled "Rule settings". It has three rows of controls:

- Field:** A dropdown menu with "DDI" selected.
- Action:** A dropdown menu with "equals" selected.
- Value:** A text input field containing "555666000".

At the bottom right, there are two buttons: "OK" and "Cancel".

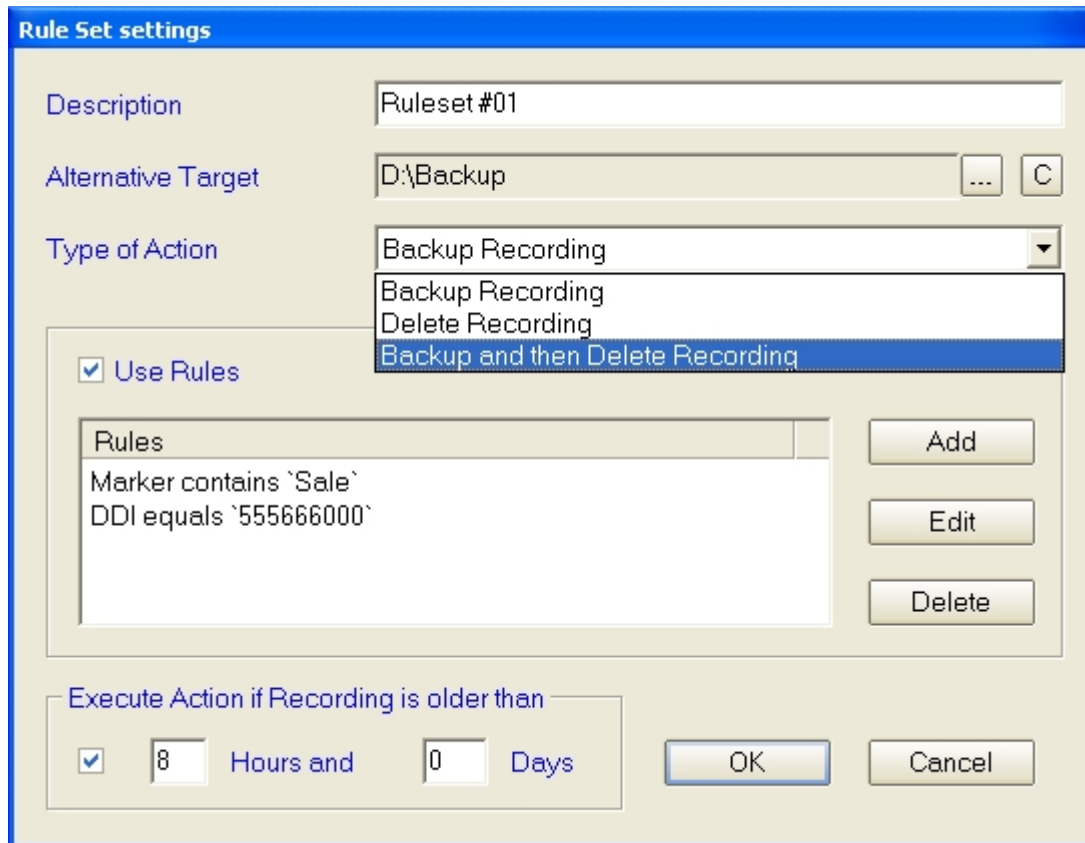
An alternative directory path can be specified in which certain recordings will be backedup to. This alternative path will overrule the main backup path(s) and will not contain any cache files.

The screenshot shows a text input field containing the path "D:\Backup". To the right of the field are two buttons: a browse button (three dots) and a clear button (C).

If no age (Hours and Days) is specified for the recordings in order to be backedup, they will be backedup regardless of age if all the rules within one of the rulesets have a positive outcome (AND function)

The screenshot shows a checkbox control with the following text: "Execute Action if Recording is older than". Below this text is a checked checkbox, a text box containing "8", the text "Hours and", a text box containing "0", and the text "Days".

The type of action to be taken is either Backup, Delete or Backup and then Delete as shown in the dropdown box below:



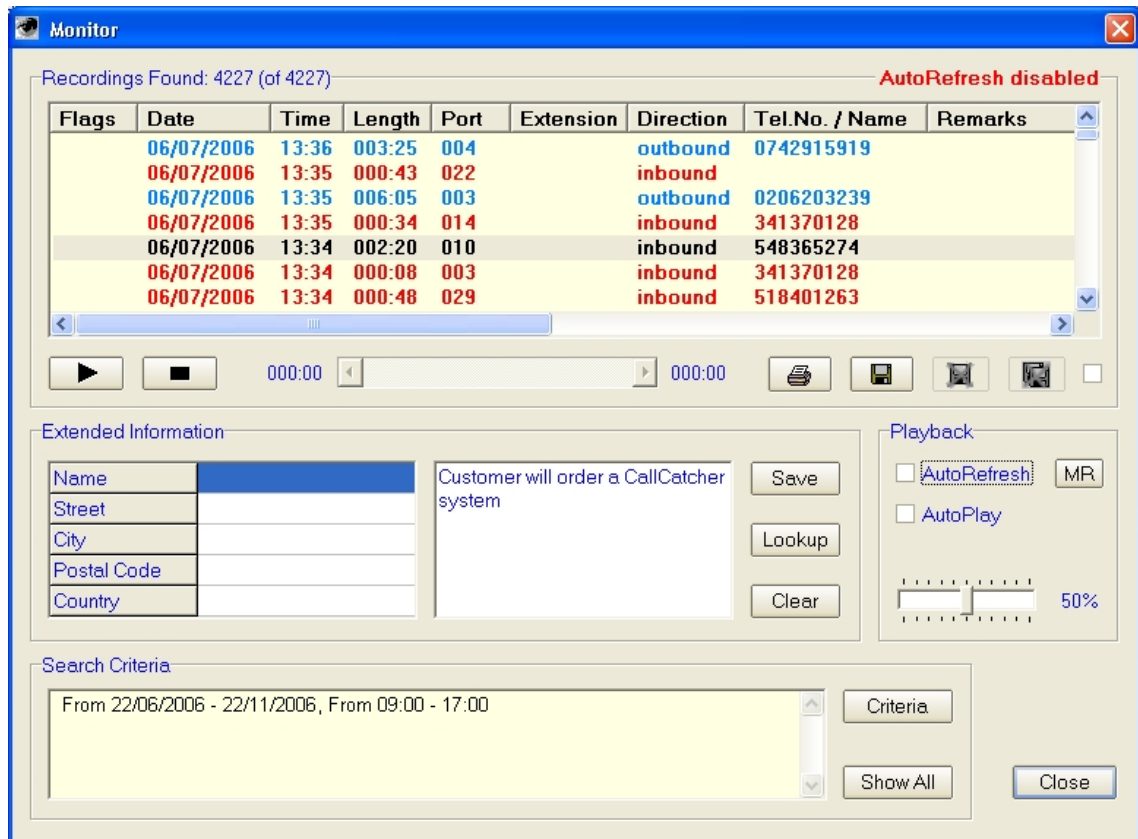
In regular backup configurations, the type of action to be taken is '**Backup Recording**'. The deletion process is then programmed using the settings in the Harddisk Management where Recordings and / or Archives can be deleted after a X number of days.

In situations where specific recordings must be deleted based on the programmed rules, the action '**Delete Recording**' can be used in combination with the age specifier (Hours and Days). Without this age specifier the action will be equivalent to '**Selective Deletion**' section in the '**Extra Settings**' (see chapter 12.3).

In case it is required not to copy but to move a recording to a (alternative) backup target you can use the action '**Backup and then Delete Recording**'.

9. MONITOR

The '**Monitor**' screen is used for searching and listening to recordings. Please note that it is only possible to playback recordings when the system is running.




The upper list shows all recordings available which have matched the search criteria. These criteria can be adapted in the '**Filter options**' screen, which is accessed by the **Criteria** button. The search criteria that can be applied are made visible in verbose form in the lower **Search Criteria** status window. The recordings that have matched the criteria can be sorted on every column item by clicking on the preferred columns heading.

By pressing the **Show All** button, all recordings available regardless of any search criteria will be displayed.

9.1 FLAGS

The **Flags** column in the recordings list can show the following attributes:

- **x** File cannot be played back now. Waiting to be unlocked.
- **X** File is permanently locked against playback.
- **A** Recording is archived by the maintenance process (voice content is removed but header is preserved)
- **B** Recording is backed-up by the backup process. Recording and header are still available and unmodified.
- **V** Recording contains a reference to an associated screen capture (video) file.
- **D** Recording is saved using Drag & Drop.
- **S** Recording is saved using the Save/Export button. 

9.2 EXTENDED INFORMATION

The '**Extended Information**' window will show information from the Phonebook if there is a accurate match available with the dialled (DDI) number or received CLI number. This information can be modified and remarks can be added to it. Click on **Save** to update/write this information into the header of the recording.

9.3 PLAYING VOICE RECORDINGS

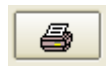



By using the Play, Pause and Stop buttons together with the slide bar, which shows the total duration of the recording as well, it is possible to scan for voice fragments within a recording very quickly.

If the '**AutoPlay**' checkbox is checked, then during scrolling of the recordings list, the recording that has received focus, will be played automatically. The volume slider bar will adjust the playback audio level between **0%** and **100%**.

Note: As soon as an item in the list of recordings is clicked, or when extended info is added / modified on a focussed item, the list will not be refreshed anymore with new recordings and the background color of the recordings list will change to indicate this. This in order to prevent the list from being updated while listening and looking for existing recordings. Clicking the '**AutoRefresh List**' checkbox, the list will return from its 'frozen' state.


9.4 EXPORTING AND ERASING RECORDINGS



The list of recordings can be written to file for printing or archiving with the Save to File button. To the right of this button there is a button that will allow saving an audio recording in its native encrypted format (including header data)  or to export it in a standard unencrypted **.wav** or **.MP3** audio format.

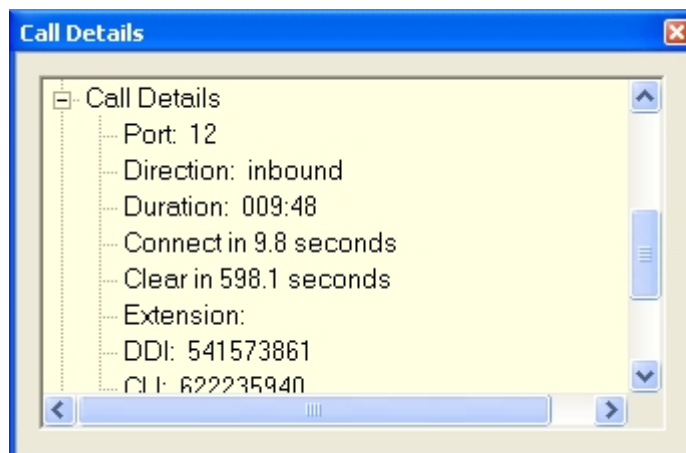
Multiple recordings can be saved or exported at the same time. Refer to the '**Drag & Drop**' section regarding filename conventions.



The single and multiple 'Erase' buttons are enabled  only when the safety checkbox to the right of these buttons is checked. When enabled, either a group of recordings (the recordings which have received focus) or all recordings that match the search criteria, are permanently erased. After the erasing operation the checkbox is cleared for safety reasons.

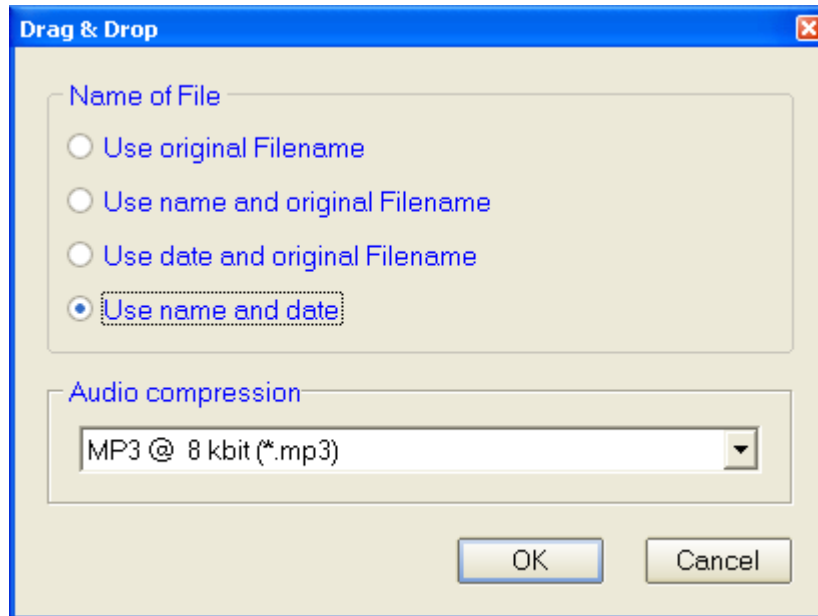
9.5 DETAILED FILE INFORMATION

By double clicking on a recording in the list, detailed information will be shown in the form of a tree-list with both generic and file specific information regarding the type of audio compression, file size etc...



9.6 DRAG & DROP

From the 'Monitor' screen, a single recording can be selected with the left mouse button and dragged & dropped onto the Windows desktop or for example into your contacts field in Outlook.



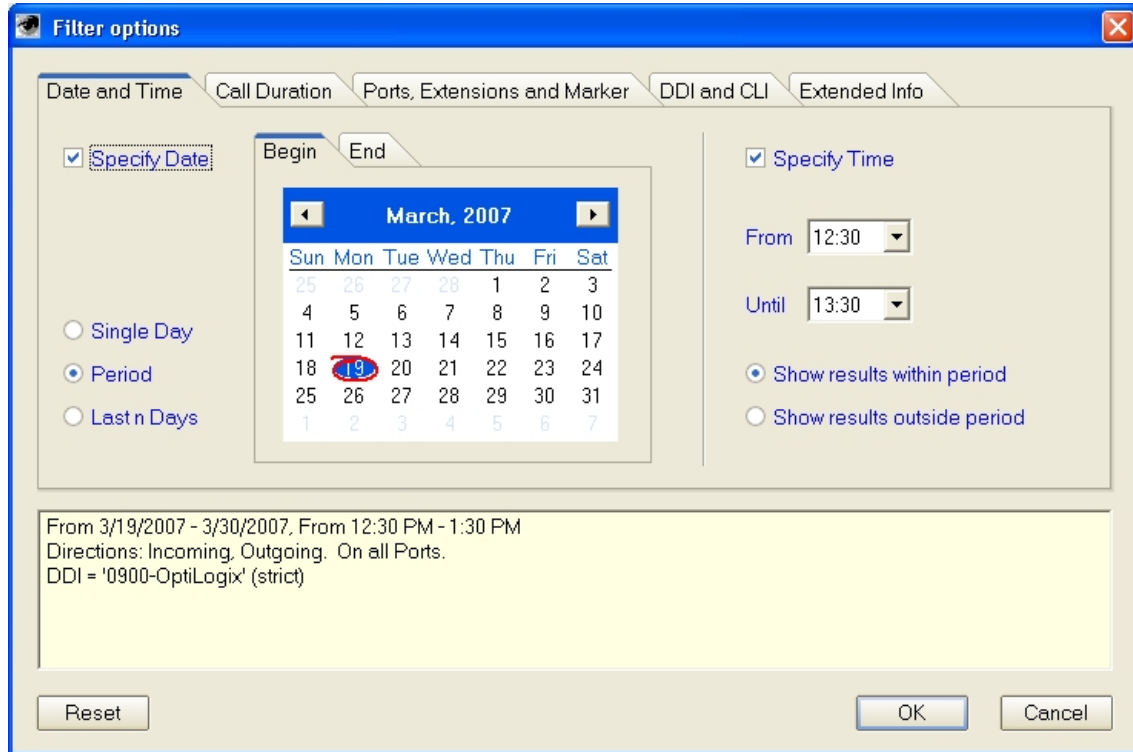
You can configure in which audio format the recording is to be converted into during the Drag & Drop operation. How the filename will be composed can be selected as well.

When using the Save/Export facility and multiple recordings are selected using the **shift** or **ctrl** key, these Drag & Drop settings will be used for generating the filenames.



Audio format conversion will be done automatically during Drag & Drop and Save/Export operations. Please take into account that this might take some time in case large recordings are to be processed.

9.7 FILTER OPTIONS



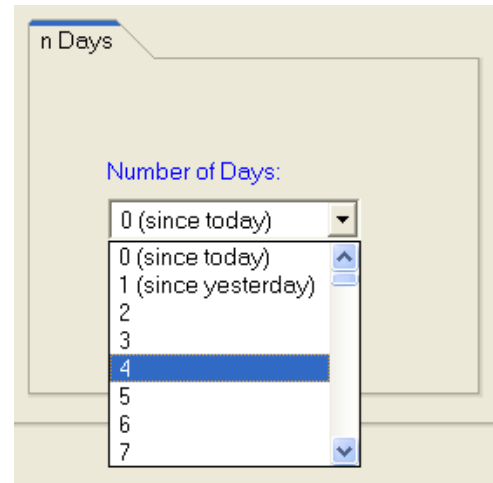
9.7.1 Date Criteria (Period)

The 'Date & Time' tab has a 'Specify Date' checkbox, which will include the date into the search criteria. The same is true for 'Specify Time', which will include the time selection into the search criteria.

The date criteria allows for selecting a 'Single Day' or a 'Period' or the 'Last n Days'. The calendars allow an easy way of picking a day, month and year. By double clicking the text presenting the month, the month can be changed and by clicking on the year value, the year can then be changed using a spin-button.

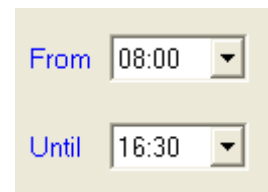
9.7.2 Date Criteria (Last n Days)

The 'Number of Days' selection allows for searching back to the last 90 days. If a longer period is required to search back for, please select the 'Period' radio button.



9.7.3 Time Criteria

The time criteria allows for selecting a time period (in 15 minutes increments) within or outside the recordings should be found.



9.7.4 Call Duration Criteria

The screenshot shows a 'Filter options' dialog box with the following configuration:

- Tab: Call Duration
- Specify Call Duration:
- Specific Duration:
- Range:
- Minimum Call Duration: 001:00 (mmm:ss)
- Maximum Call Duration: 005:00 (mmm:ss)

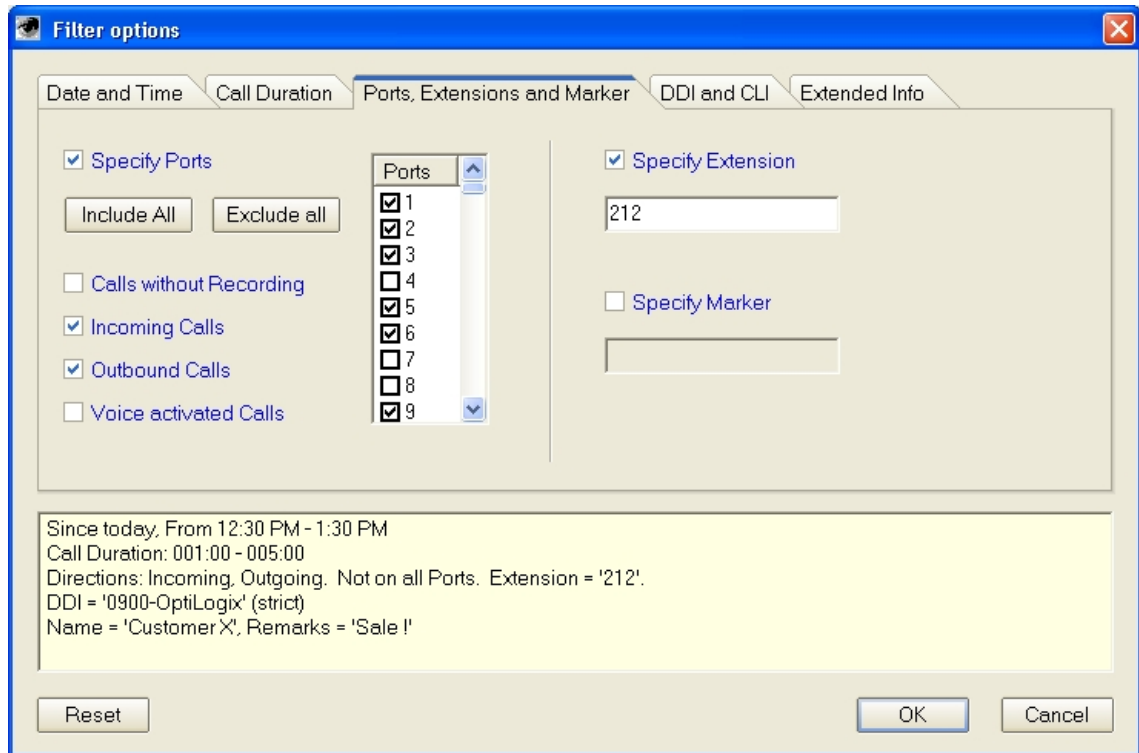
Preview text:

```
Since today, From 12:30 PM - 1:30 PM
Call Duration: 000:00 - 999:59
Directions: Incoming, Outgoing. On all Ports.
DDI = '0900-OptiLogix' (strict)
```

Buttons: Reset, OK, Cancel

Recordings can be filtered on the basis of duration of the call. This can be done by specifying a single duration (with a 10 second margin) or by range.

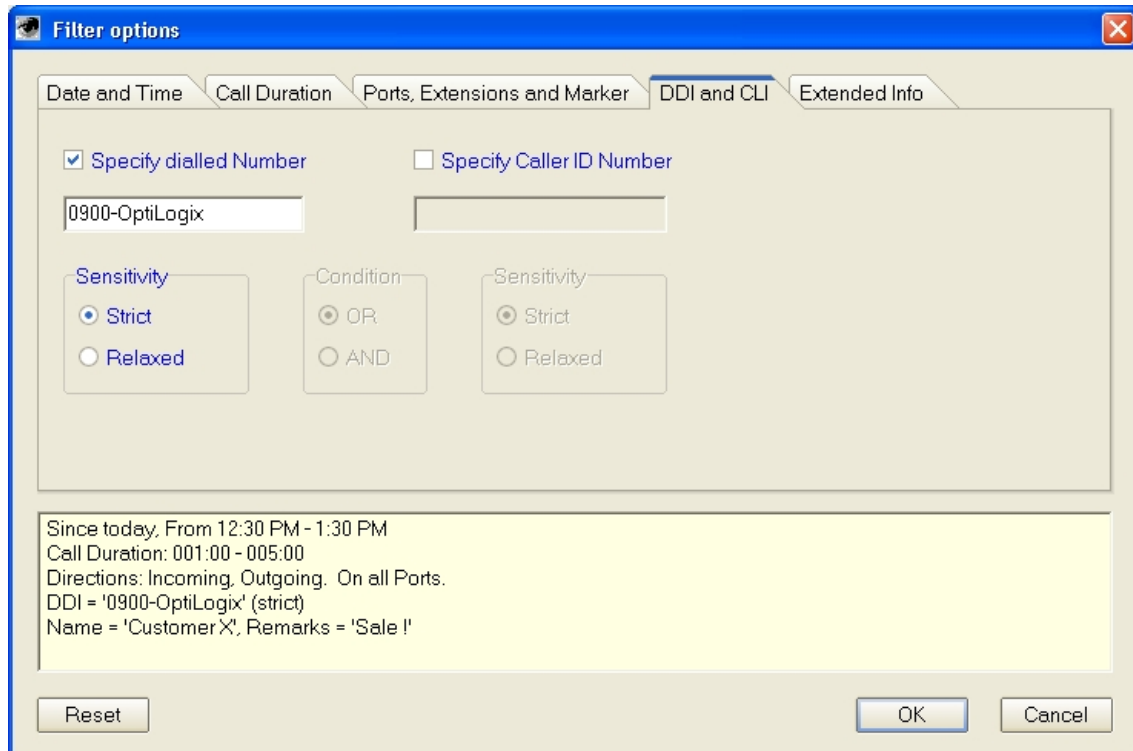
9.7.5 Port Criteria



The Ports criteria allows for Including or Excluding certain ports (recording channels) and to search for incoming, outgoing or both types of calls. Criteria also can be set for Voice activated calls.

Extension numbers (when using [CallLink](#) for PBX SMDR integration or in case of recording extensions directly) and Markers can be specified as well.

9.7.6 Dialed Number and Caller-ID Criteria



Dialed- or received Caller-ID telephone numbers can be searched on. The criteria are enabled when the **'Specify dialed Number'** and **'Specify Caller ID Number'** checkboxes are checked respectively. On both criteria there is a selection possible to choose either **'Strict'** or **'Relaxed'** search sensitivity.

Please note that the Caller-ID option is available on all ISDN firmware and Digital Extension firmware with D-channel signalling support (some PBX models only).

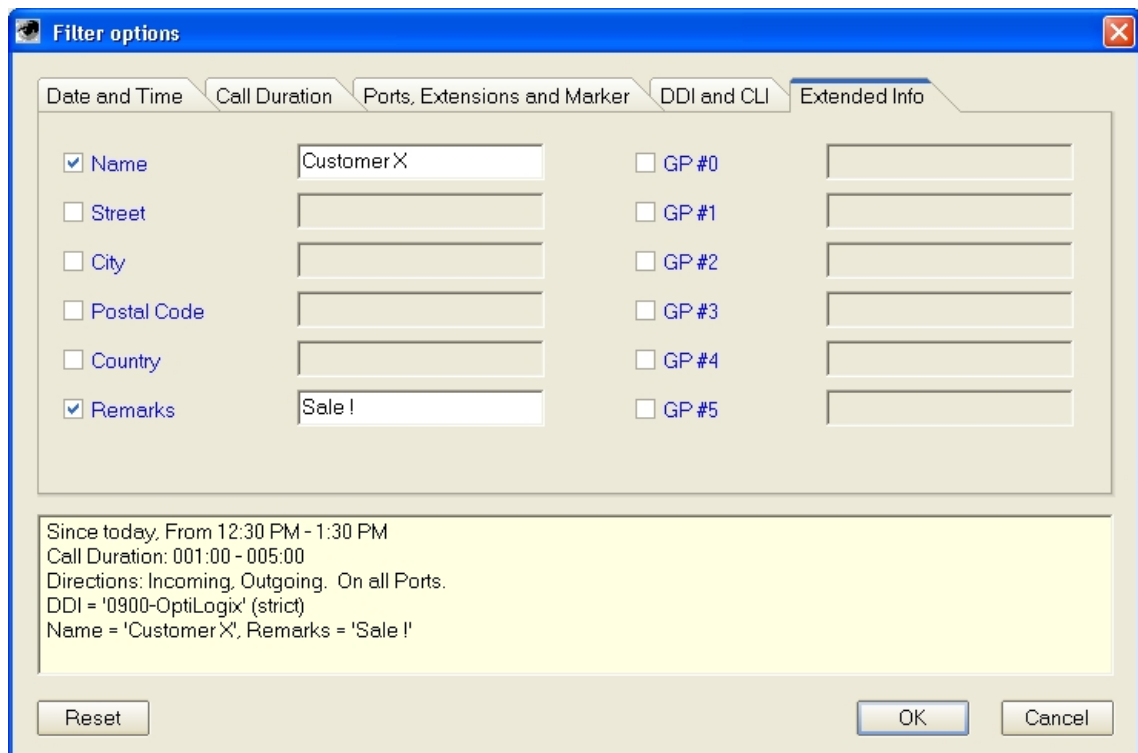
The strict sensitivity rules for the searching number(s) are:

- Match the recorded numbers fully or,
- The searching number must fully fit the first N digits of the recorded numbers.

The relaxed sensitivity will treat the searching number(s) as a subset. A match is found if the search number is found anywhere as a part of a recorded number.

The conditions '**OR**' and '**AND**' are used to select if one of the searching numbers must match (OR condition), or if both the numbers must match (AND condition).

9.7.7 Extended Info Criteria



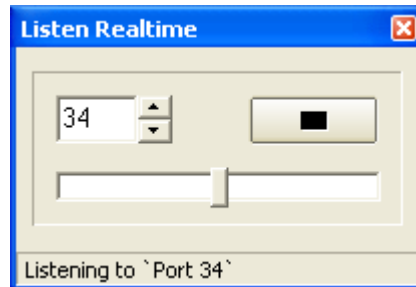
The screenshot shows the 'Filter options' dialog box with the 'Extended Info' tab selected. The dialog has a blue title bar and a close button in the top right corner. It contains several tabs: 'Date and Time', 'Call Duration', 'Ports, Extensions and Marker', 'DDI and CLI', and 'Extended Info'. The 'Extended Info' tab is active and displays a grid of search criteria. The 'Name' and 'Remarks' fields are checked and contain 'Customer X' and 'Sale!' respectively. The 'GP #0' through 'GP #5' fields are unchecked and empty. Below the grid, a summary box shows the current filter settings: 'Since today, From 12:30 PM - 1:30 PM', 'Call Duration: 001:00 - 005:00', 'Directions: Incoming, Outgoing, On all Ports.', 'DDI = '0900-OptiLogix' (strict)', and 'Name = 'Customer X', Remarks = 'Sale !'. At the bottom, there are 'Reset', 'OK', and 'Cancel' buttons.

Field	Value	Field	Value
<input checked="" type="checkbox"/> Name	Customer X	<input type="checkbox"/> GP #0	
<input type="checkbox"/> Street		<input type="checkbox"/> GP #1	
<input type="checkbox"/> City		<input type="checkbox"/> GP #2	
<input type="checkbox"/> Postal Code		<input type="checkbox"/> GP #3	
<input type="checkbox"/> Country		<input type="checkbox"/> GP #4	
<input checked="" type="checkbox"/> Remarks	Sale !	<input type="checkbox"/> GP #5	

Since today, From 12:30 PM - 1:30 PM
Call Duration: 001:00 - 005:00
Directions: Incoming, Outgoing, On all Ports.
DDI = '0900-OptiLogix' (strict)
Name = 'Customer X', Remarks = 'Sale !'

In this '**Extended Info**' tab, one or more Extended Information items can be specified here and used in the search criteria. Please note that searching is not case sensitive.

10. REAL-TIME LISTEN



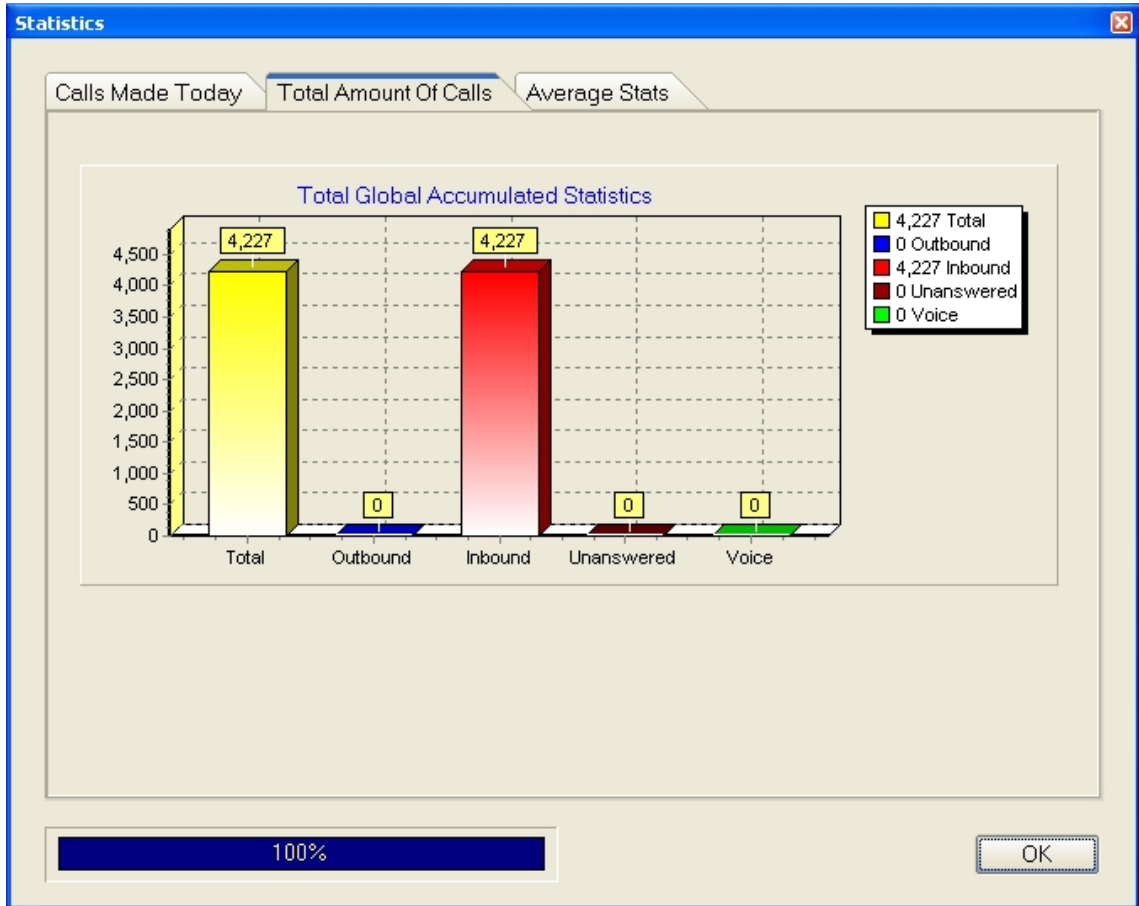
This '**Listen Real Time**' toolbox window allows for real-time listening on any of the available [CallCatcher](#) ports at any time.

The editbox in combination with the spin button allows for a quick scanning of the available ports. The Gain slider sets the audio level of the systems monitoring output.

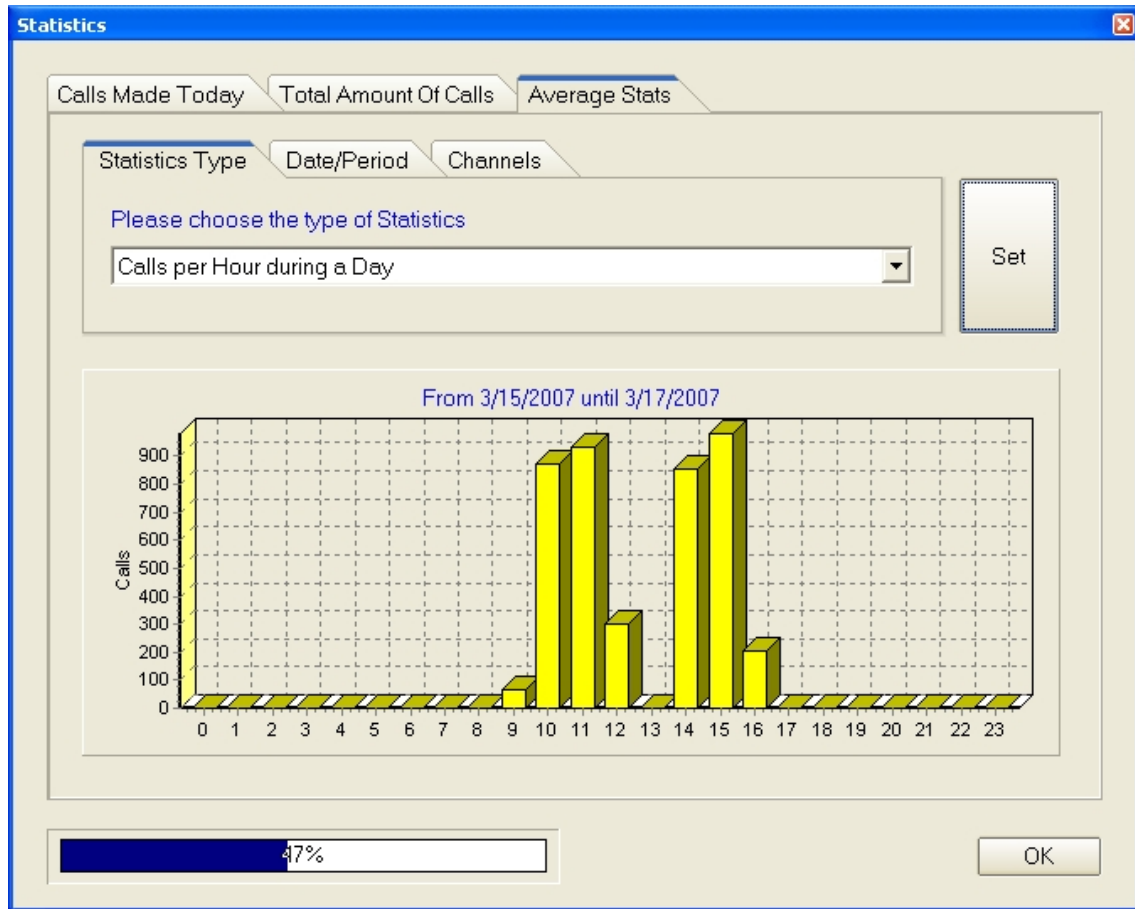


Right clicking with the mouse on one of the line status 'LEDs' will make this options panel appear. Live monitoring of a channel can be started or stopped.

11. STATISTICS



Statistical information provided is based upon the information in the voicerecording database. This includes full recordings as well as archives (voice contents that are removed, but which have their header information preserved)



12. EXTRA SETTINGS

12.1 SYSTEM ALARM SETTINGS

The screenshot shows the 'Extra Settings' dialog box with the 'System Alarm' tab selected. The dialog is divided into several sections:

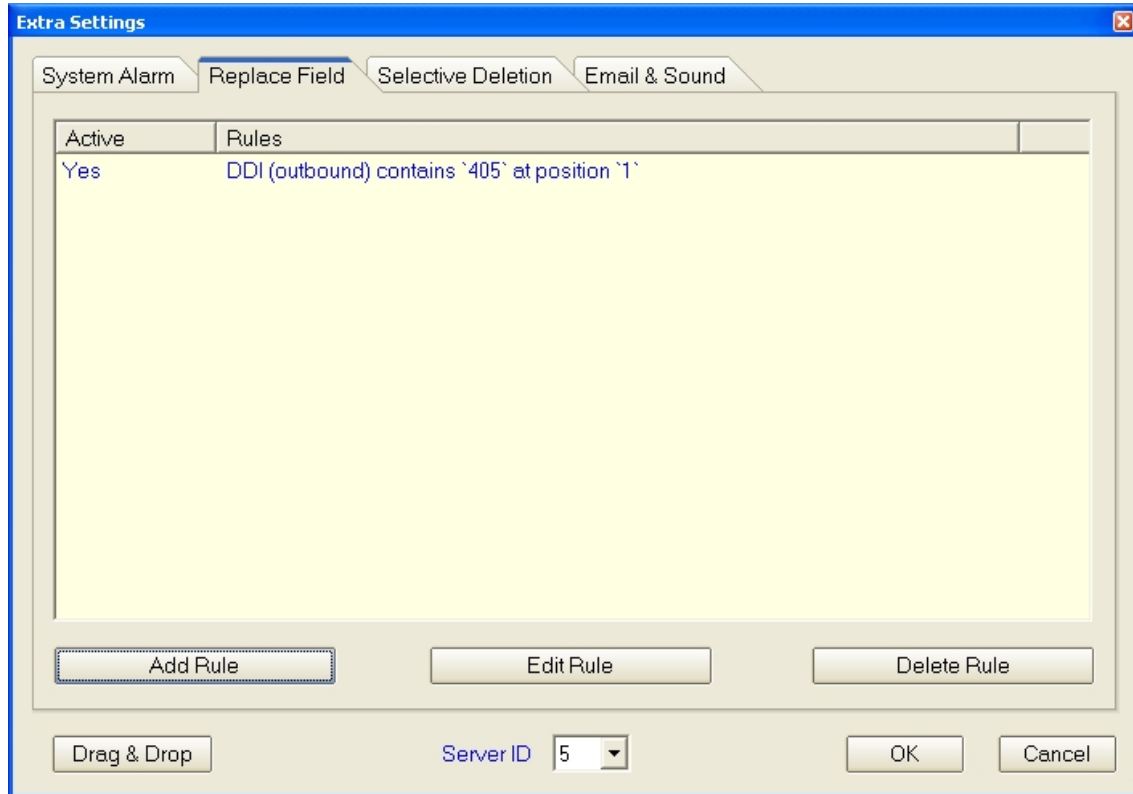
- Alarm Events:**
 - Early Server Warnings:**
 - Space in use exceeds 90 %
 - Backup Media Warnings:**
 - Space in use exceeds 90 %
 - Operational Errors
 - Operational Server Events:**
 - Operational Errors
 - Non backed-up Recordings deleted
 - No Call Activity in the last 1 day(s)
- Method(s) of Signalling:**
 - Play local Alarm on operational Events
 - E-mail events to: support@voicerecording.com

Buttons at the bottom include 'Drag & Drop', 'Server ID' (set to 5), 'Reset', 'Test E-mail', 'View Log', 'OK', and 'Cancel'.

Additional facilities are provided by the CallCatcher to support E-mail based warnings.

An E-mail can be sent when storage or backup capacity is exceeding pre-programmed limits or when operational errors or warnings are to be reported. These reports can also be viewed using the **View Log** button.

12.2 REPLACE FIELD



Data Fields like CLI, DDI and Extensions can be remapped to different numbers and Fields to support Least Cost Routing number translation and Extension number creation based on incoming DDI / outgoing CLI.

By creating multiple replacement rules a very flexible re-mapping structure can be achieved.

Set Rule [X]

Use Rule

Condition

DDI (outbound) contains 405 at position 1

Action(s) to perform

Copy digit(s)

DDI (inbound) Length FOUND at position FOUND

Remove digit(s)

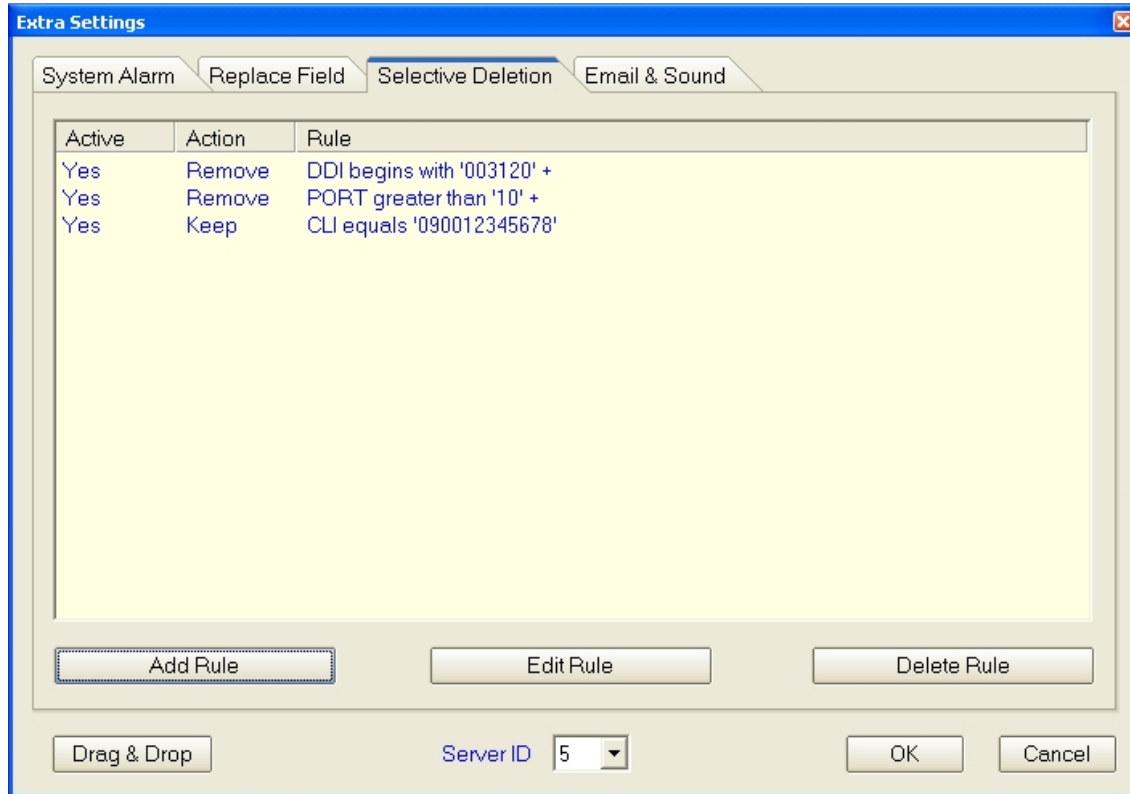
DDI (outbound) Length FOUND at position FOUND

Insert Digit(s)

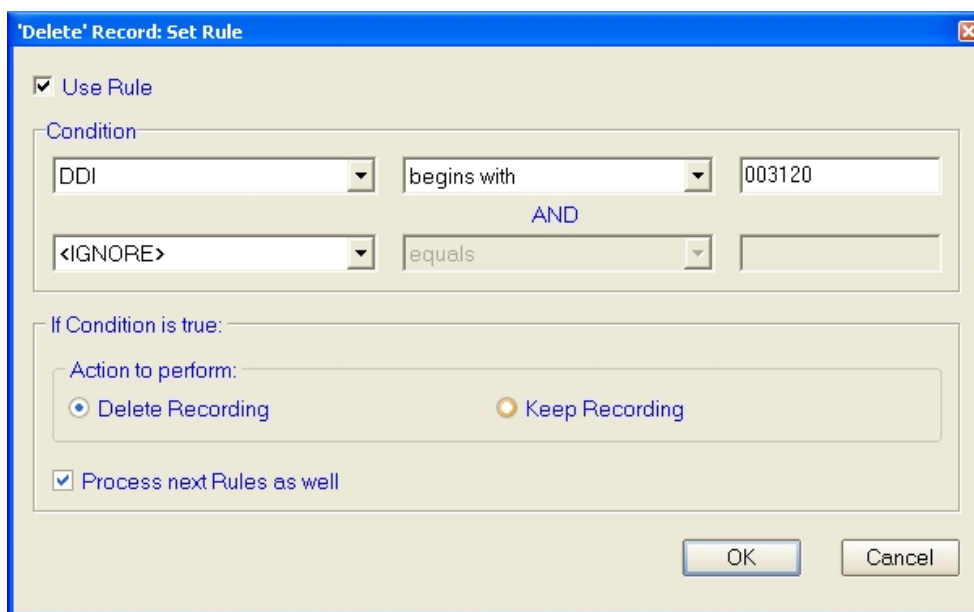
Extension Digit(s) 3 at position FOUND

OK Cancel

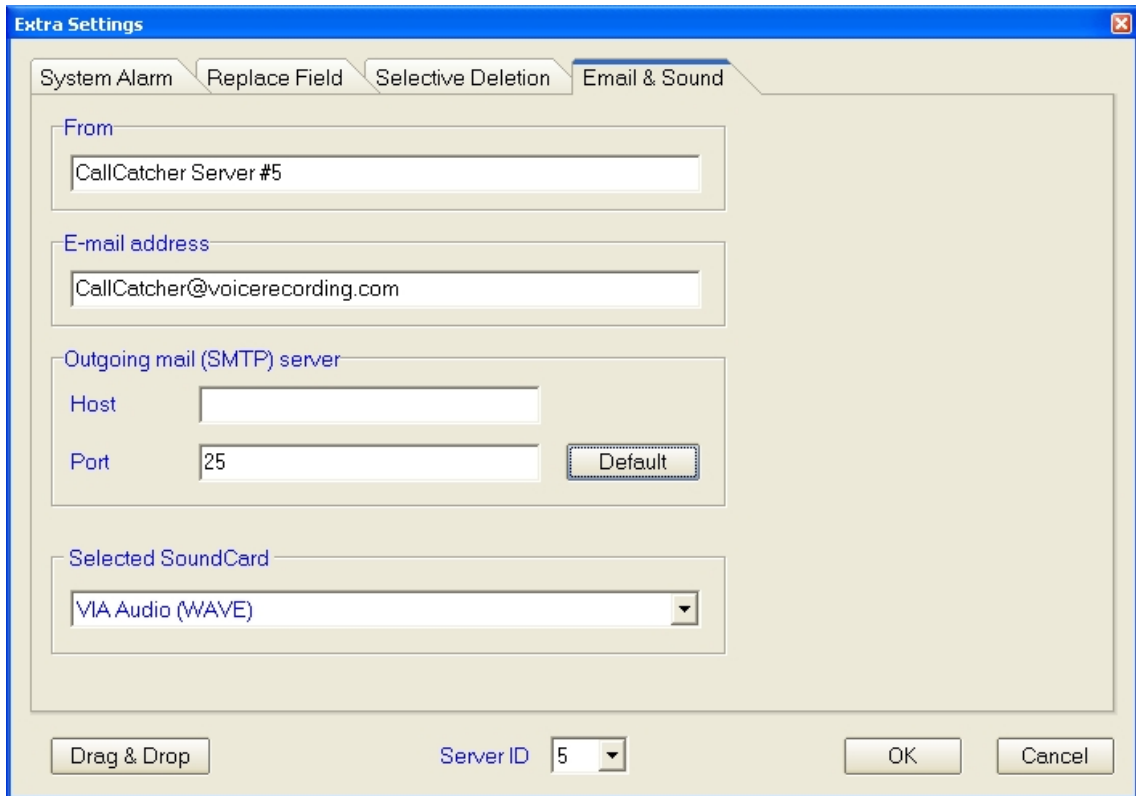
12.3 SELECTIVE DELETION



Selective deletion allows for recordings to be deleted or preserved based on a set of programmable rules.



12.4 E-MAIL & SOUND



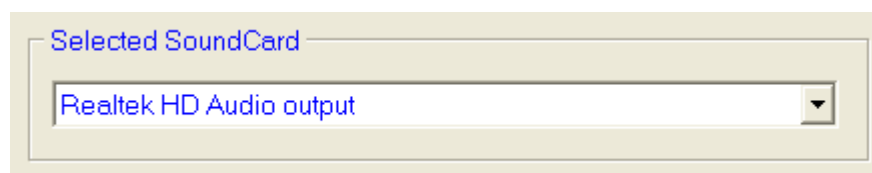
The screenshot shows the 'Extra Settings' dialog box with the 'Email & Sound' tab selected. The dialog has four tabs: 'System Alarm', 'Replace Field', 'Selective Deletion', and 'Email & Sound'. The 'Email & Sound' tab contains the following fields and controls:

- From:** A text box containing 'CallCatcher Server #5'.
- E-mail address:** A text box containing 'CallCatcher@voicerecording.com'.
- Outgoing mail (SMTP) server:** A section containing:
 - Host:** An empty text box.
 - Port:** A text box containing '25' and a 'Default' button.
- Selected SoundCard:** A dropdown menu showing 'VIA Audio (WAVE)'.

At the bottom of the dialog, there is a 'Drag & Drop' button, a 'Server ID' dropdown menu showing '5', and 'OK' and 'Cancel' buttons.

Settings for sending E-mail through SMTP are configured here.

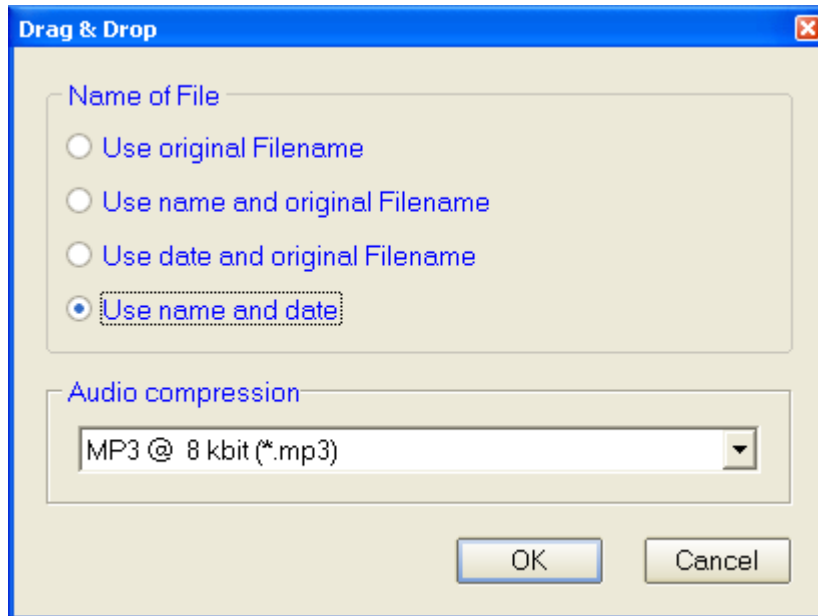
Windows machines can have multiple sound resources, a specific sound resource must be selected in case the default resource does not operate with the [CallCatcher](#) server.




This is a close-up of the 'Selected SoundCard' dropdown menu from the 'Extra Settings' dialog. The dropdown is open, showing the selected option 'Realtek HD Audio output'.

12.5 DRAG & DROP

From the 'Monitor' screen, a single recording can be selected with the left mouse button and dragged & dropped onto the Windows desktop or for example into your contacts field in Outlook.



You can configure in which audio format the recording is to be converted into during the Drag & Drop operation. How the filename will be composed can be selected as well.

When using the Save/Export facility and multiple recordings are selected using the **shift** or **ctrl** key, these Drag & Drop settings will be used for generating the filenames. 

Audio format conversion will be done automatically during Drag & Drop and Save/Export operations. Please take into account that this might take some time in case large recordings are to be processed.

12.6 SERVER ID

A CallCatcher Server Identification number can be programmed in the 'Extra Settings' screen.



For multi machine configurations with a centralized backup and a centralized CallPlayer for search and playback, it is required that each recording Server has a unique Server ID (0 – 7).

This will assure that all recordings will have unique names as well as unique article numbers.

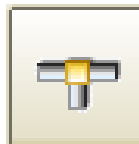
Make sure to set this only once during installation. Changing this setting afterwards is not recommended.

13. CLIENTS

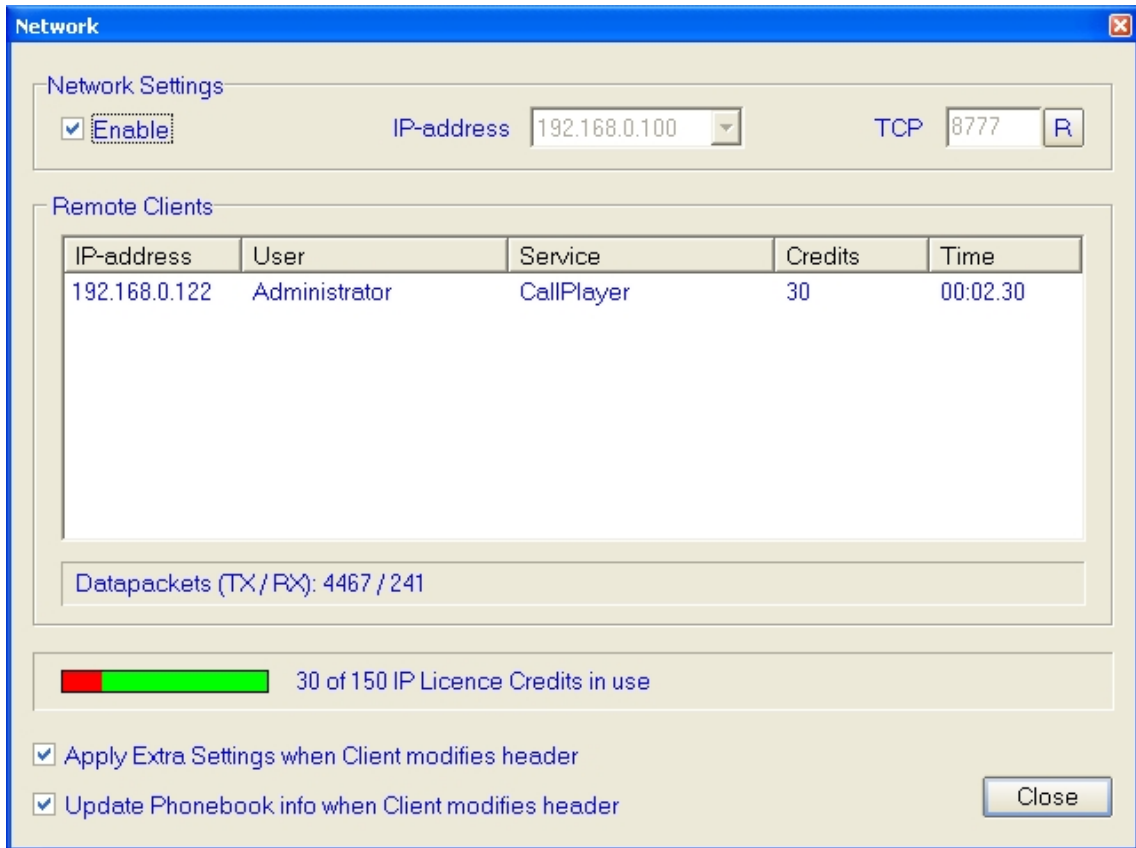
The [CallCatcher](#) supports real-time monitoring of live conversations over the corporate LAN using streaming techniques. With a minimum of processor overhead and network traffic, crystal clear voice can be delivered to any desktop computer (with Windows compatible sound card) that is connected to the corporate LAN or WAN including the Internet. Besides real-time monitoring, also stored and archived recordings can be played and managed over the corporate LAN.

The same high level of security is offered as with local access to the [CallCatcher](#) server application and its encrypted recordings. The streaming packets travelling over the corporate LAN are heavily encrypted as well.

Only [CallLive](#) / [CallMonitor](#) (Real Time Monitoring) clients and [CallPlayer](#) (remote and local playback) clients with sufficient monitoring rights can login from their workstation onto the [CallCatcher](#) server.



13.1 NETWORK CONNECTION STATUS



The **Network** status window shows which clients are currently logged in.

Clients that are logged in are shown in the list with their IP address, User name, Type of Service and the amount of required IP licence credits.

As every [CallCatcher](#) server has a pre-defined (optionally extendable) number of IP license credits available, there is a limit to the number of clients that can be logged in at the same time. This depends on the total amount of IP credits available and the total accumulated amount of IP credits required by the various client applications.

By focussing on an IP client in the list and clicking the right mouse button, that client can be forced to disconnect.

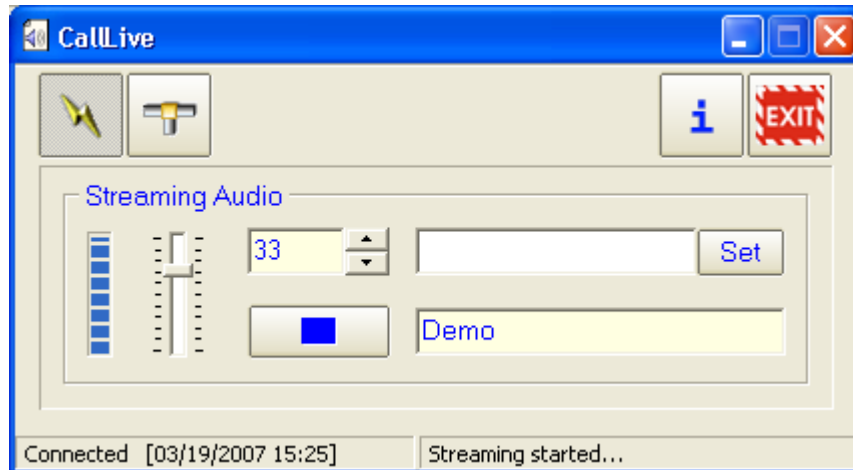
13.1.1 Header updating

- Apply Extra Settings when Client modifies header
- Update Phonebook info when Client modifies header

With the above checkboxes you can specify if the header must be updated with Extra Settings and/or Phonebook information as soon as a client program requests modification of a header.

For example a client program like [CallLink](#) modifies a header by adding extension number '138' to it. If selective deletion is programmed to delete recordings that contain extension numbers that start with a '1', the first checkbox must have been checked to make sure that the Extra Settings (like selective deletion) will be applied to this header and therefore effectively deleting this recording.

14. CALL-LIVE

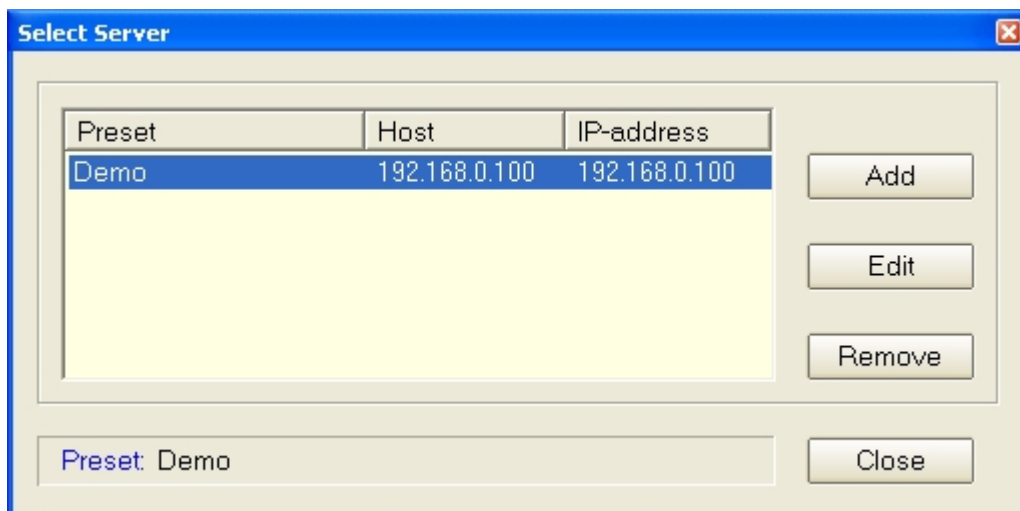


This **CallLive** client application enables to listen, on a remote client machine with a Windows compatible sound card, to live conversations on selected CallCatcher ports / channels.

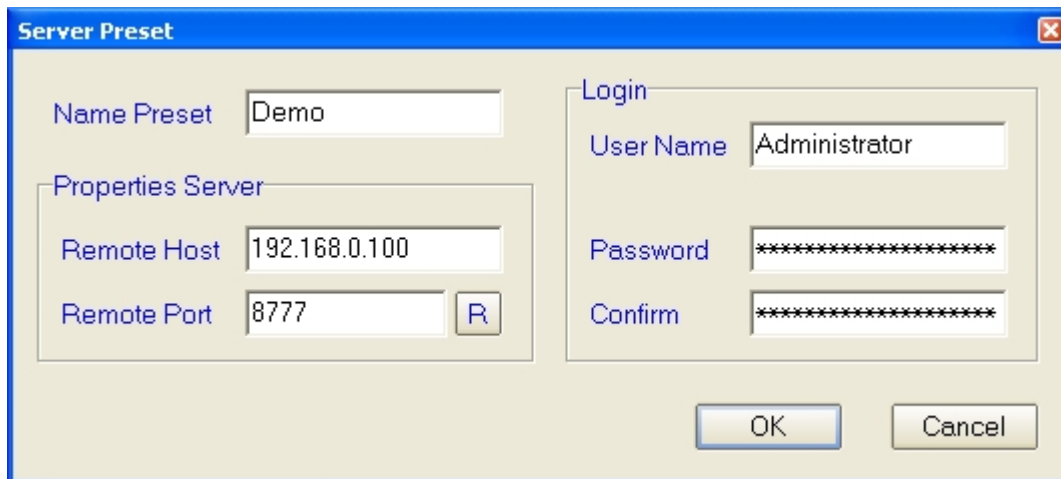
14.1 LOGIN



Using this configuration button a specific CallCatcher server to login to can be selected from a user defined list of servers.



Select a preset and click on **Close** to activate this preset. New presets can be created using the **Add** button. Adding or editing a preset will make the following screen appear:



This '**Server Preset**' panel must contain the same '**User Name**' and '**Password**' as the user would have on the [CallCatcher](#) server in order to be able to login.

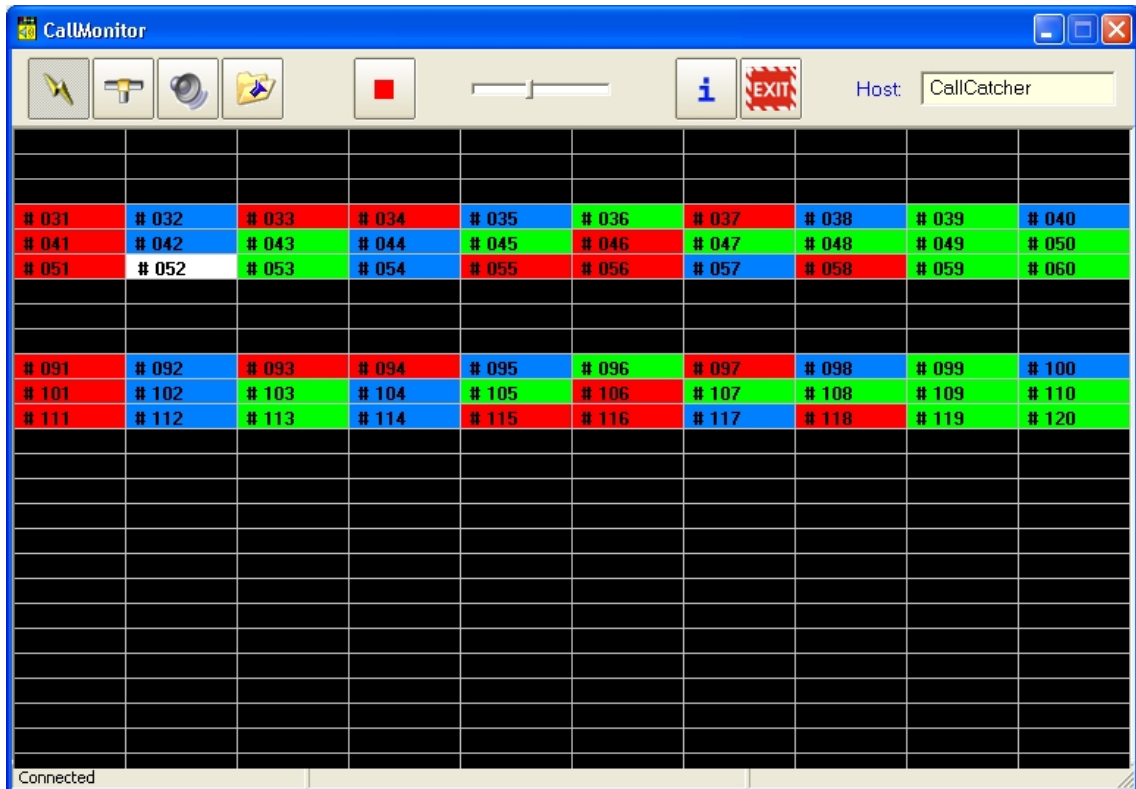


Using the connect button, this client application can login in a secured way to the CallCatcher and enables a highly secured and encrypted transmission of voice packets over the LAN.

The CallCatcher port to be monitored, as well as the audio gain can be adjusted on the fly. Using the **Set** button a description can be attached to a specific port number and therefore enabling an easy way of searching for a specific port to listen to in real-time.

Note: make sure the machine is connected to the local LAN to allow CallCatcher remote client software login.

15. CALL-MONITOR



This **CallMonitor** client application is a more sophisticated version of **CallLive**. It enables a 2-dimensional overview of active recording channels. By focussing on a cell (using the mouse or cursor keys) you can live monitor a conversation on that channel. Right click and select **'Start Monitor'** or toggle the **SPACE** bar on your keyboard to start listening.

A cell that has started streaming will become white coloured. It is possible to record the channel being monitored to a **.wav** file. Either select **'Start Record'** using the mouse right-click or toggle the **r** key on your keyboard or click on the record button.

During recording the white cell will blink twice a second. To stop recording execute the same mouse or keyboard action.

The location where recordings will be stored can be specified using this button.



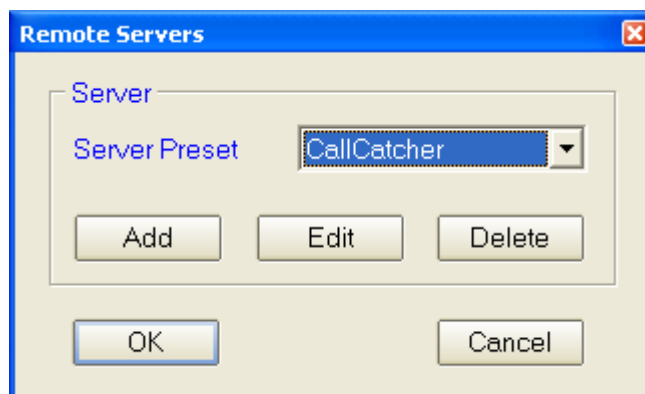
The filename (.wav extension) will reflect the port number or the user defined name of the cell. If a recording with a particular name already exists a sequence number like (3) will be appended to the filename to make it unique.

Using the mouse right click a number of options can be selected like assigning a user defined name to a cell or to move / swap the cell to another position on the screen. In this way a floor map can be generated reflecting the physical locations of the monitored telephone extensions.

15.1 LOGIN



Using this configuration button a specific CallCatcher server to login to can be selected from a user defined list of servers.



Select a preset using the dropdown box and click on **OK** to activate this preset. New presets can be created using the **Add** button. Adding or editing a preset will make the following screen appear:



Server Preset	CallCatcher
Host (address)	192.168.0.100
User Name	Admin
Password #1	*****
Password #2	*****

OK Cancel

This 'Server Entry' panel must contain the same 'User Name' and 'Password' as the user would have on the [CallCatcher](#) server in order to be able to login.

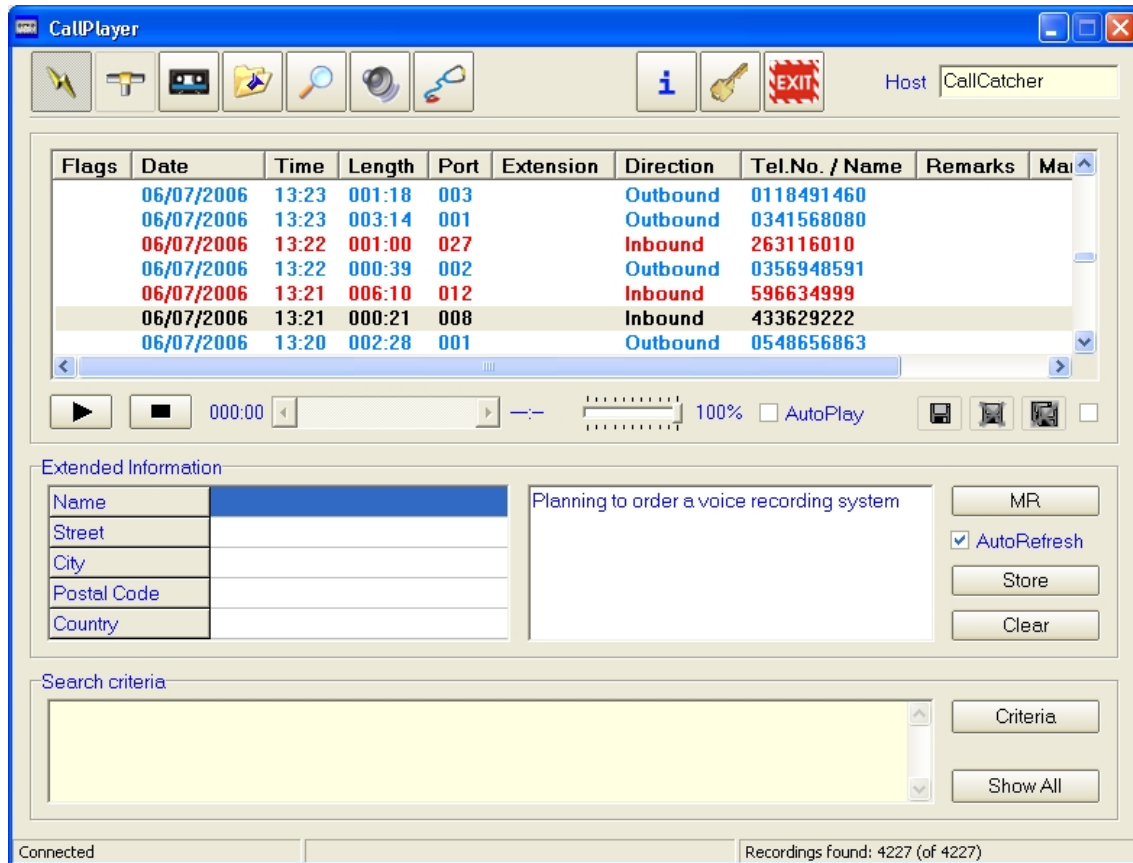


Using the connect button, this client application can login in a secured way to the CallCatcher and enables a highly secured and encrypted transmission of voice packets over the LAN.

The CallCatcher port to be monitored, as well as the audio gain can be adjusted on the fly.

Note: make sure the machine is connected to the local LAN to allow CallCatcher remote client software login.

16. CALL-PLAYER



The **CallPlayer** is a client application that is used for searching and listening to recordings. These can be remote recordings (located on one or more CallCatcher servers), locally saved recordings or backups. Functionally it is almost identical to the 'Monitor' screen in the CallCatcher server. Please refer to chapter 9 for more information on the searching facilities.

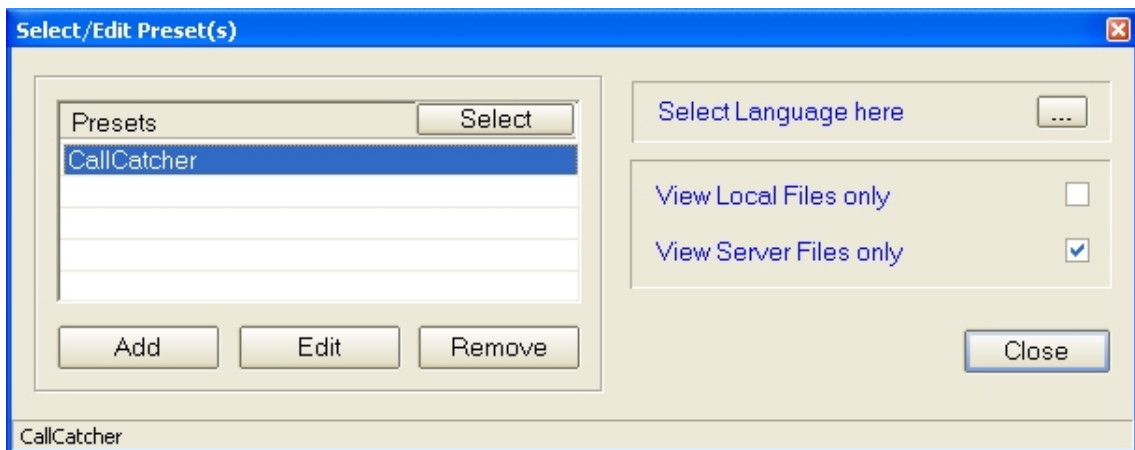
16.1 SAVING RECORDINGS LOCALLY

Recordings can be saved on the local client machine using the save button. This is very useful for important recordings that should not be left on the [CallCatcher](#) server where these might be archived and deleted after some time. These saved recordings will be kept on the local client machine and will be marked as such in the recordings list.



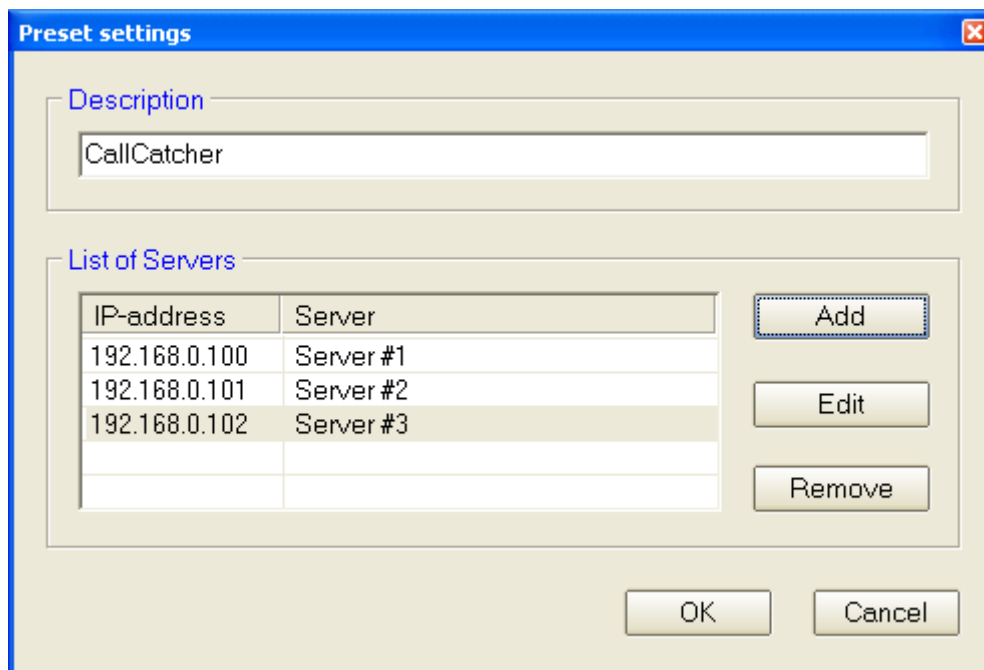
Multiple recordings can be saved or exported to **.wav** or **.MP3** at the same time. Refer to the '**Drag & Drop**' section regarding filename conventions.

16.2 LOGIN

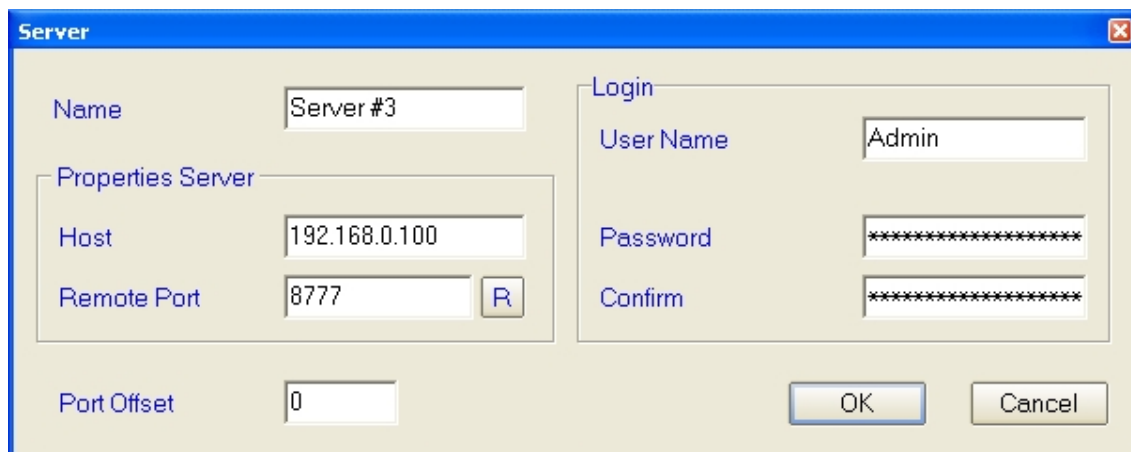


Login to the [CallCatcher](#) server is done by creating a server group preset. As [CallPlayer](#) can login to multiple servers at the same time, it is required to specify a list of servers each with an IP address, user name and password. Click on the **Select** button to actually select a server group for login !

When a user name and / or password is not programmed in one of the server entries you will be prompted to enter your user name / password during login.



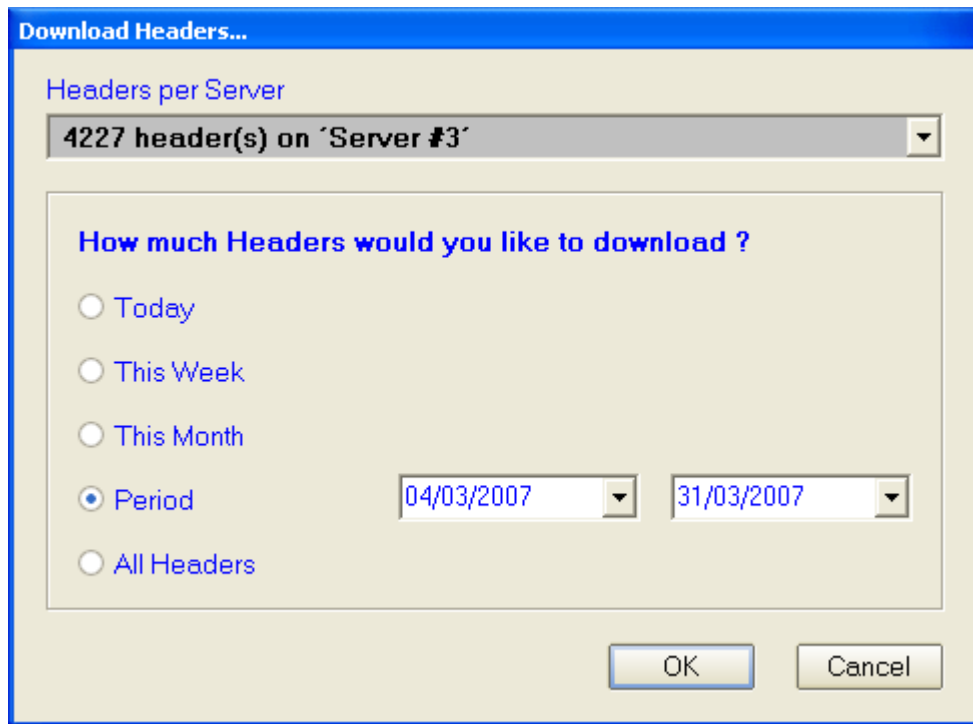
The above example shows a list of three servers that are programmed in the server group called 'CallCatcher'.



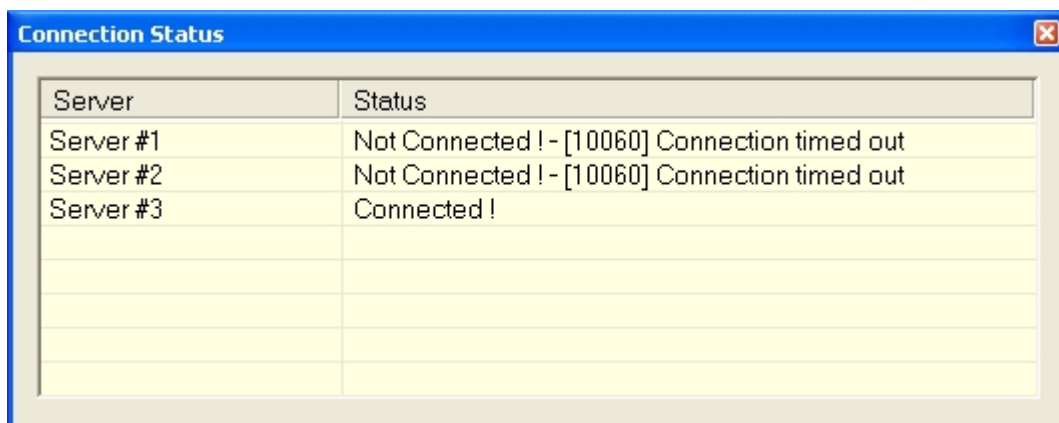
The details for login to each of the CallCatcher servers is programmed here. Each server can have an optional '**Port Offset**' programmed.

As each server will have recording ports that are in the range of 1..256, it is likely that duplicate port numbers will occur in case of login to multiple servers. With a port offset programmed, the port numbers can be remapped so that there will be no overlap in these.

During login the following panel will appear requesting what to do:



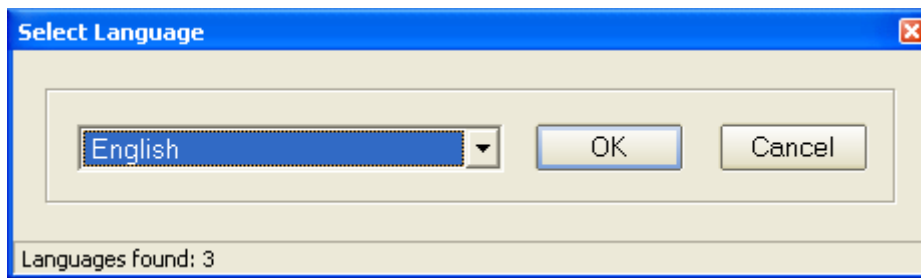
By specifying a date period the number of recording headers to be downloaded can be reduced significantly and therefore speeding-up the required download time.



A network connection status report will appear in case of an unsuccessful attempt to connect to a server or when a server disconnects while it was connected. Click anywhere on the panel to close it.

16.3 LANGUAGE SUPPORT

Support for multiple languages is available and can be selected in the panel shown below. Languages can be created and added. See the **.lng** files in the **\Program Files\CallPlayer** directory. Use an existing language, rename it (use a **.lng** extension!) and modify it to suit your new language.



16.4 LOCAL (BACKUP) FILES

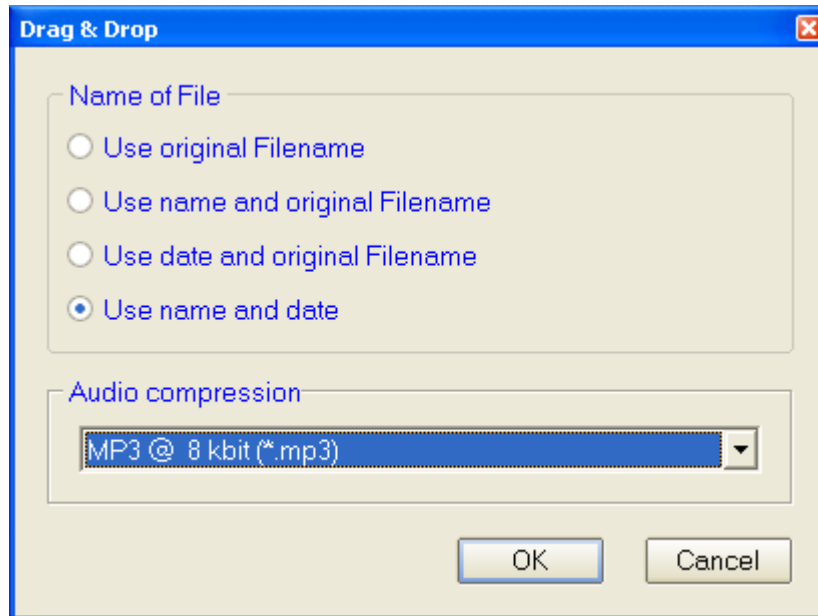
To operate **CallPlayer** in a local playback mode (for reading backups) enable the **'View Local Files only'** checkbox. In this mode only local (backup) files will be shown. Login to the server is required to view and playback recordings.

16.5 EXTENDED INFORMATION

Any changes made to for example Extended information fields by other clients or changes in the server database are automatically updated at all other **CallPlayer** clients on the network.

16.6 DRAG & DROP

From the main screen, a single recording can be selected with the left mouse button and dragged & dropped onto the Windows desktop or for example into your contacts field in Outlook.



You can configure in which audio format the recording is to be converted into during the Drag & Drop operation. How the filename will be composed can be selected as well.

When using the Save/Export facility and multiple recordings are selected using the **shift** or **ctrl** key, these Drag & Drop settings will be used for generating the filenames.



Recordings that are located on the CallCatcher must be streamed over the network and converted into your specified format. This will be done automatically during Drag & Drop and Save/Export operations. Please take into account that this might take some time in case large recordings are to be processed.

16.7 MANUAL RECORDING

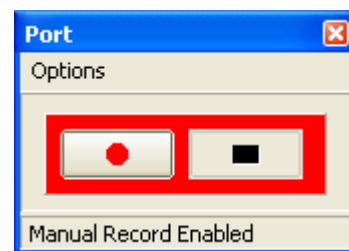


When authorized (see 'User Management' chapter 5) it is possible to manually start and stop recordings on a specific port or extension. This usually will be the clients own telephone handset.



In the 'Options' menu of the 'Manual Record' panel (always stays on top) you can select a specific port or extension to record manually. A recording can be

started using the Record button. The Stop button on the right will end a recording in progress. Please note that a recording is not automatically started or stopped at the start and the end of a call. Line signalling is ignored as soon as manual recording is enabled. This allows for multiple concatenated calls within a manually started recording. Click on '**Record Manually**' to enable manual recording.

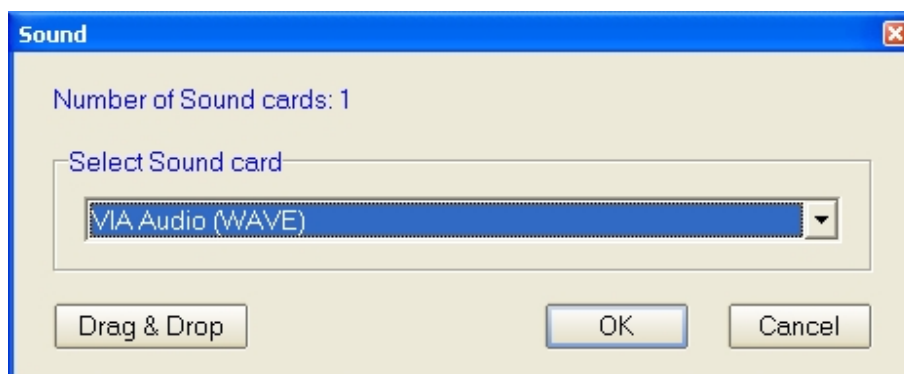


Note: In the server '**Port Settings**', inbound and outbound recording must be enabled as manual triggered recordings will be presented as either inbound or outbound calls depending on the selection made using the right mouse click on the record button.

16.8 SELECTING A SOUND RESOURCE



As a Windows machine can have multiple sound resources, a specific sound resource must be selected in case the default resource does not operate with [CallPlayer](#).

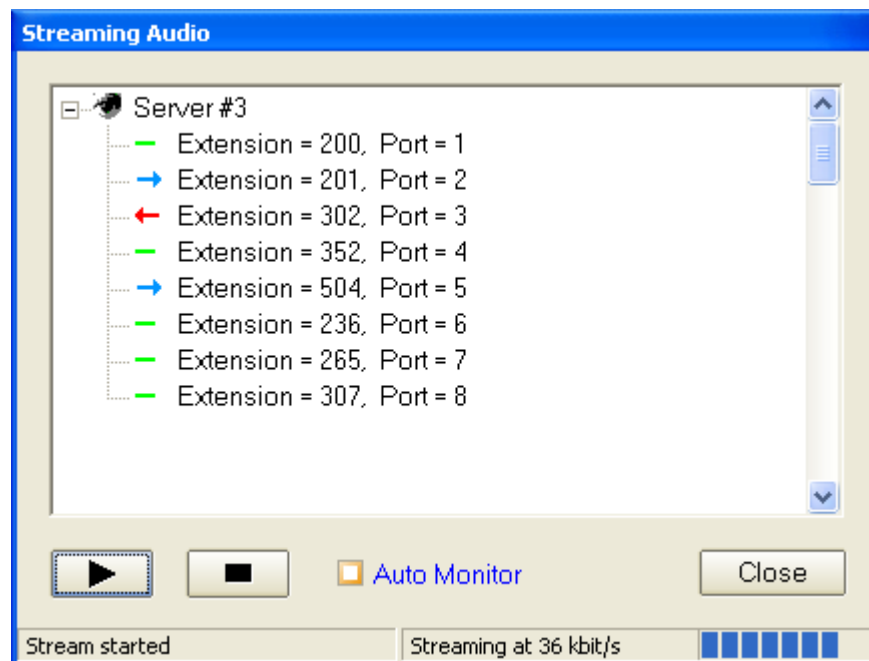


16.9 LIVE MONITORING

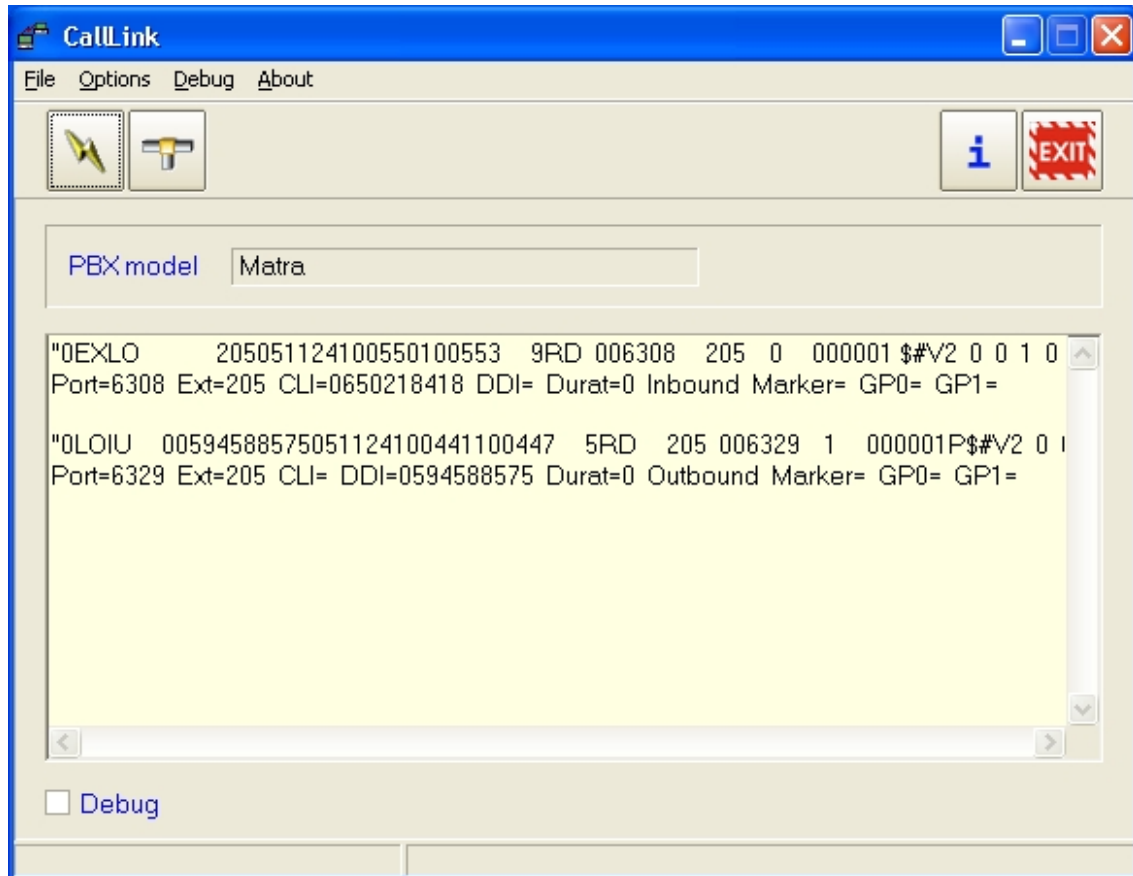


Each recording port on every CallCatcher server can be monitored in real-time. Using the tree view below, open a server, select a port and click on the play button. Only ports that are enabled will appear in the tree.

The '**Auto Monitor**' checkbox when checked will cause automatic streaming of audio (assuming play button was pressed) as soon as a port in the list is selected.



17. CALL-LINK



CallLink is a wizard based fully programmable PBX SMDR interface Client program that is capable of integrating RS232 data or TCP/IP data from PBX systems with the **CallCatcher** database.

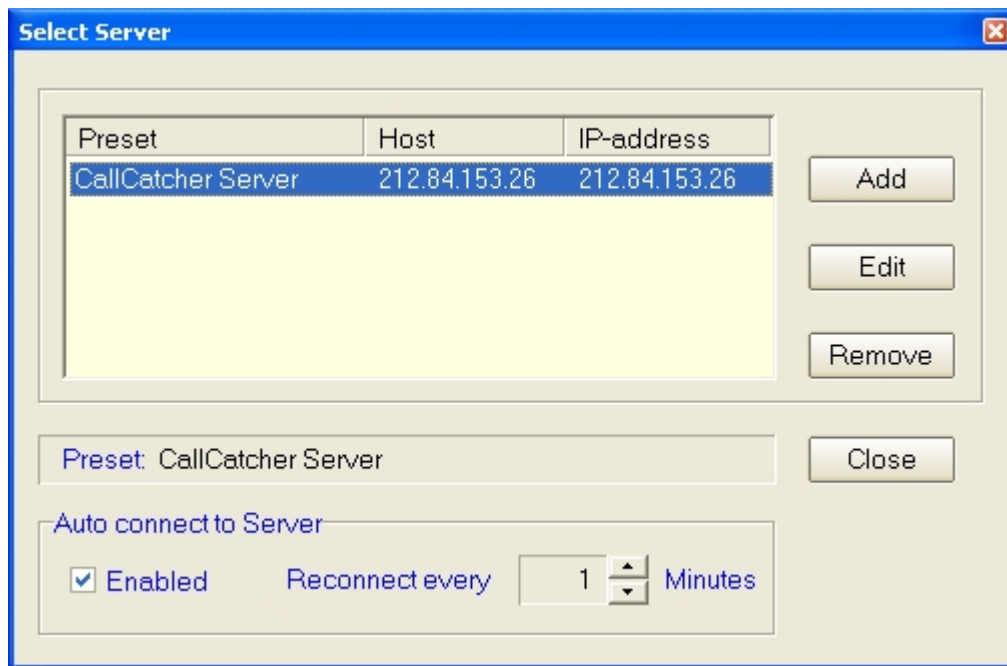
The purpose of this is to include additional PBX extension information to systems that are interfaced to the CO lines of a PBX.

In case CLI or DDI information is not available from the **CallCatcher** itself (in case of digital extension recording without D-channel support), this information can be integrated as well if it is available from the PBX SMDR data.

17.1 NETWORK SETTINGS



Using this configuration button a specific CallCatcher server to login to can be selected from a user defined list of servers.

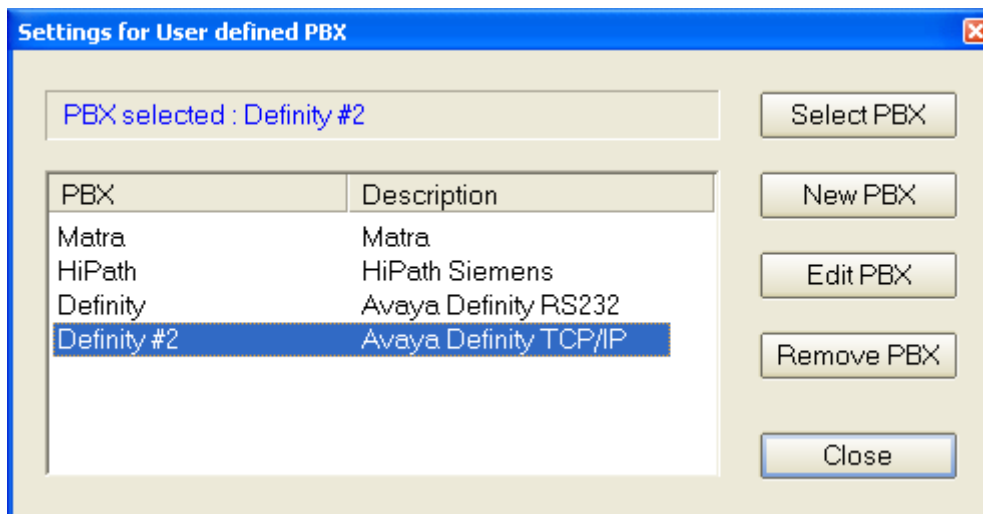


As CallLink is a vital client program to integrate PBX SMDR information into the recording database, it has an auto (re)connect facility that will try to login to the CallCatcher server at a programmable interval when the TCP/IP connection is lost.

17.2 WIZARD

Using the build-in wizard for SMDR data training, virtually any PBX SMDR format can be decoded. Both single line and multi line SMDR formats.

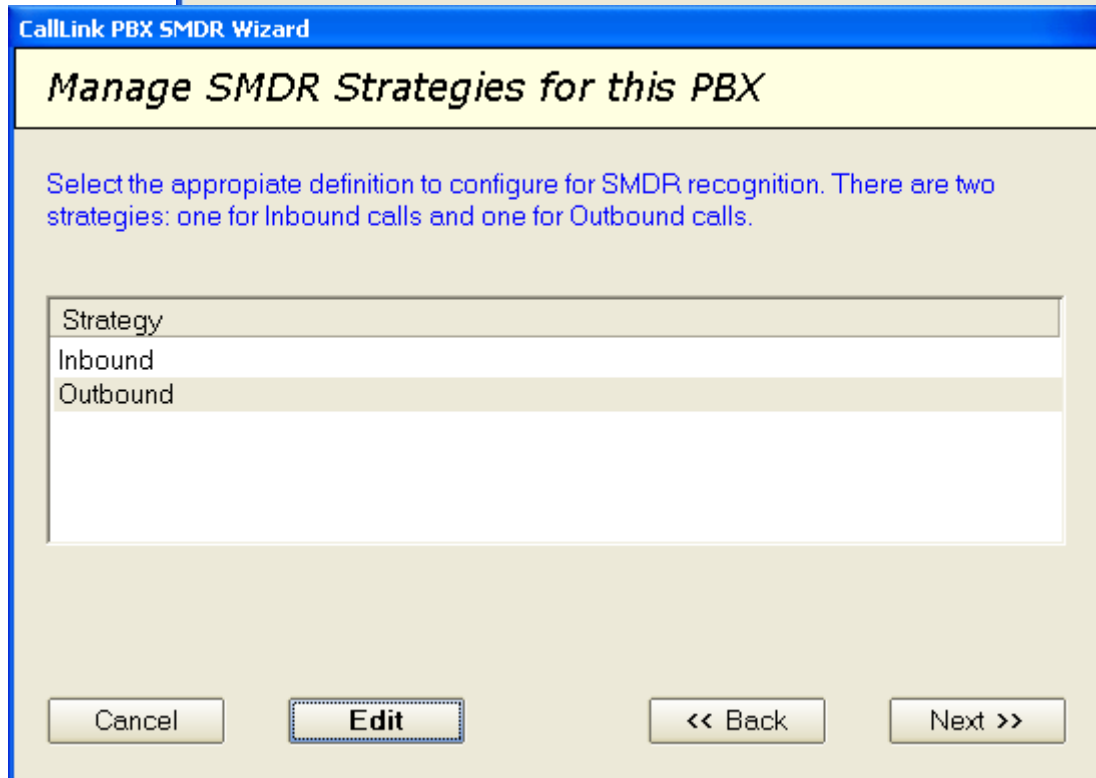
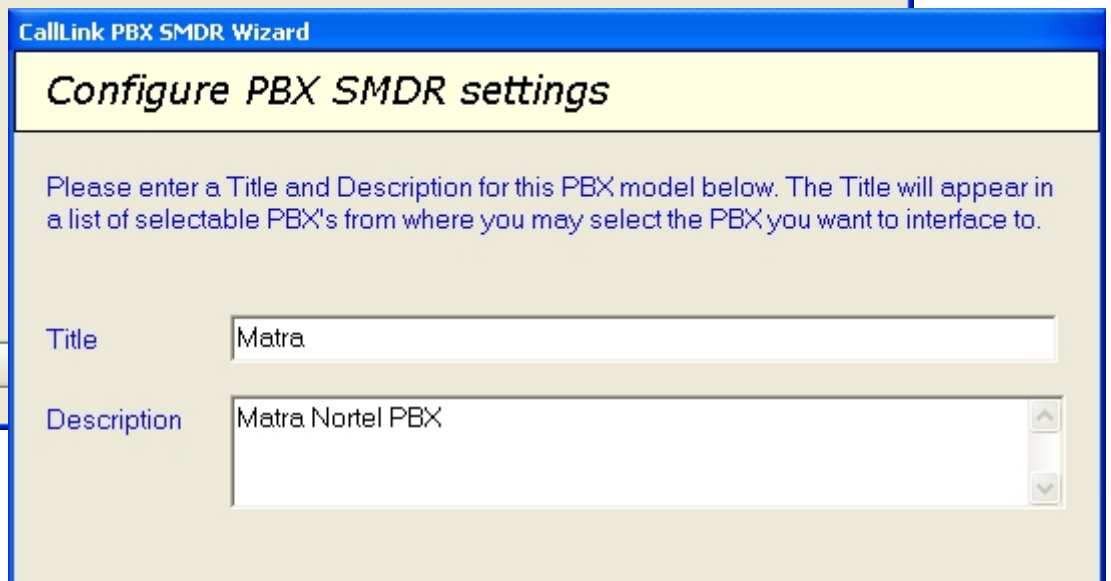
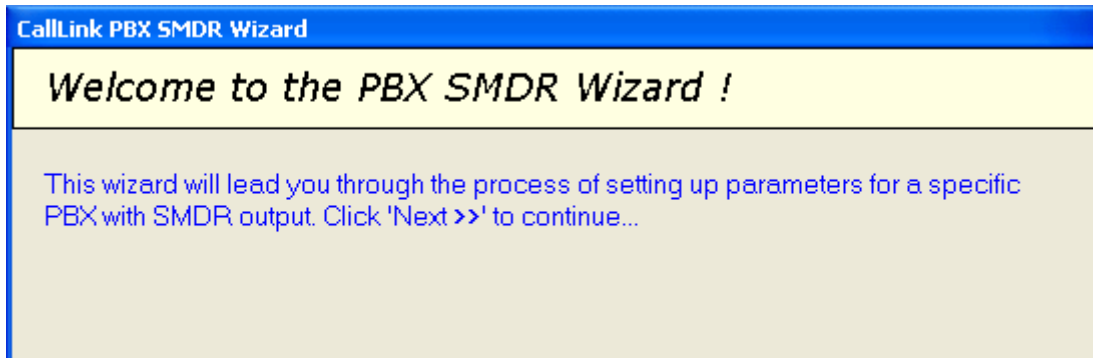
Click on '**New PBX**' to create a new PBX entry. To use a PBX preset make sure to focus on that preset and click '**Select PBX**' !



There are basically two strategies that must be identified. One for Inbound calls and one for Outbound calls. It is assumed that complete SMDR data is always received at the end of the call (with a +/- 10 second margin). Intermediate SMDR data can be ignored.

Therefore it is important to 'train' the system first on how to recognize in inbound and outbound call SMDR data string. In any SMDR format there are always points of recognition that can be used to identify the type of SMDR string. It can be by checking if a field contains a specific value (or one out of a list of values) or even by checking if data in a specific position in the SMDR is missing.

The next step is then to 'train' the system on where to find certain datafields like CLI, DDI, Extension and Call Duration (hours, minutes, seconds).



17.2.1 Edit a Strategy

Select an Inbound or Outbound strategy and click on **Edit**.

Step 1 of 3

Define SMDR Strategy

Manage settings here for the selected strategy. You will have to configure the following SMDR information fields:

- Trunk Number (Port Number)
- Extension (Agent Number)
- Call Duration
- CLI
- DDI
- Conditions for Call directions and Multi line SMDR
- Optional fields like Agent / Group Name and Remarks

Cancel Next >>

Step 2 of 3

Define SMDR Strategy: Define Conditions

Condition

- Field is equal to '0LOIU'
- Field is equal to 'V2'

Add Remove

Please do not forget to select the location for this condition (sample box above)

Condition for selected text:

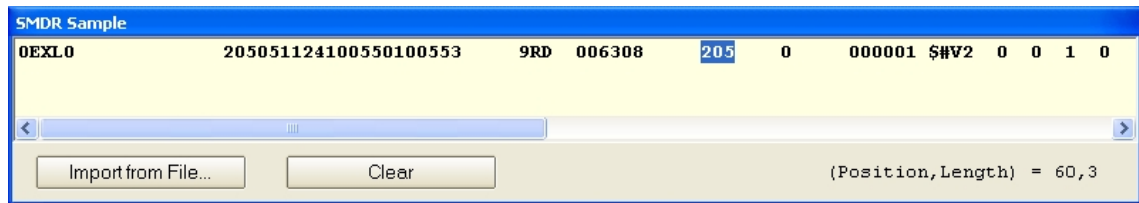
Field is equal to ▼

V2 Ignore Case

Set

Cancel << Back Next >>

This step (2 of 3) is an important step where points of recognition are programmed that clearly identify that a SMDR string matches the Inbound or Outbound strategy.



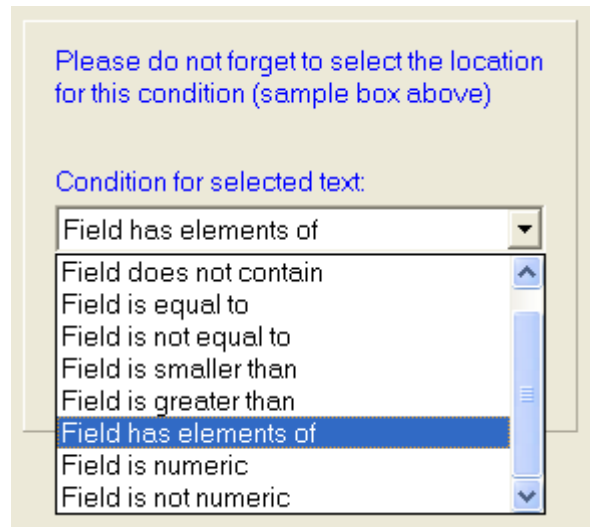
A 'SMDR Sample' memobox will appear in which a SMDR string can be pasted into (or use the **Import from File...** button).

Now click on the **Add** button first to create a new condition. Then from the below dropdown box select a specific condition and enter in the editbox just below a piece of data that should match the selected condition.

Check **'Ignore Case'** when case insensitivity is required.

Now highlight (in blue) in the above sample memobox the SMDR data field to which the condition must apply.

If all is programmed correctly click the **Set** button to update this entry in the **'Condition'** list.

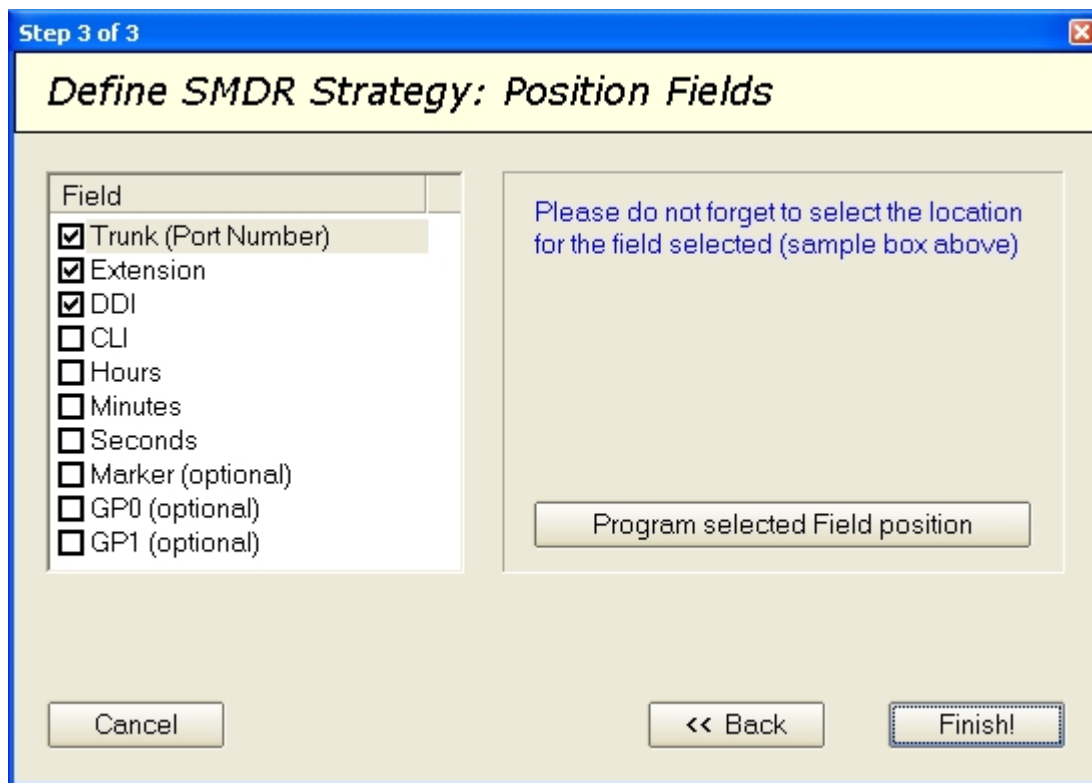


More entries can be created that among each other present an AND function. So all programmed conditions must give a positive result before the Inbound or Outbound strategy can be recognized.

Note: verify all programmed entries by focussing on each entry and see if the correct datafield in the memobox is highlighted and the correct settings are shown.

In step (3 of 3) all the different data fields in the SMDR string are to be programmed.

Here again the '**SMDR Sample**' memobox is used to highlight all the different data fields of interest.



Focus and check / uncheck the field to be programmed in the '**Field**' list (A field that is unchecked will be ignored during the matching process).

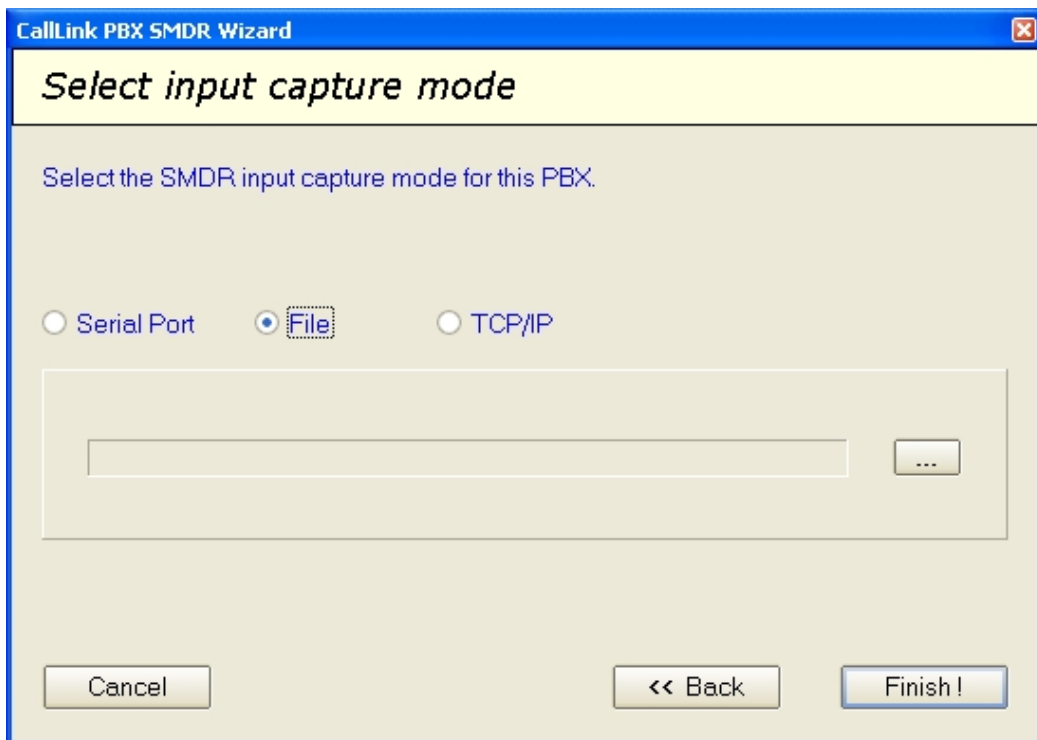
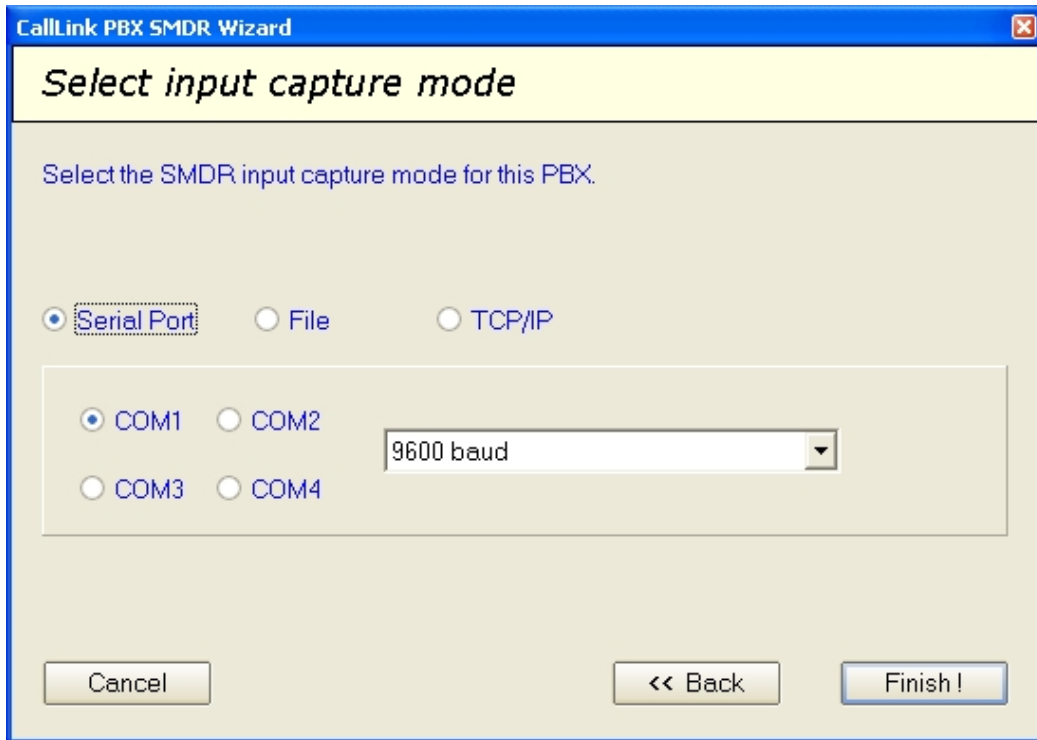
Then highlight the actual field in the sample memobox and click on **Program selected Field position** to program this field.

Note: verify all programmed entries by focussing on each entry and see if the correct datafield in the memobox is shown.

When ready click on **Finish !** and continue with the next strategy or go to the '**input capture mode**' setup.

17.2.2 SMDR input capture

SMDR input capture can be configured for RS232, File or TCP/IP based connectivity with a PBX.



CallLink PBX SMDR Wizard

Select input capture mode

Select the SMDR input capture mode for this PBX.

Serial Port File TCP/IP

Server Port [] EOL [13] [10]

Remote Host [192.168.0.100] [2080]

Cancel << Back Finish !

In TCP/IP mode an EOL (End Of Line) character sequence must be programmed in order to feed the received message into the CallLink parser (in RS232 mode it is by default character code 10 or 13 that terminates the SMDR line).

'**Server Port**' mode and '**Remote Host**' mode are available. Please specify the TCP/IP port number and in '**Remote Host**' also specify the IP address where to login to.

When ready click on **Finish !** and now the setup for this PBX entry is completed.

17.2.3 SMDR sample testing

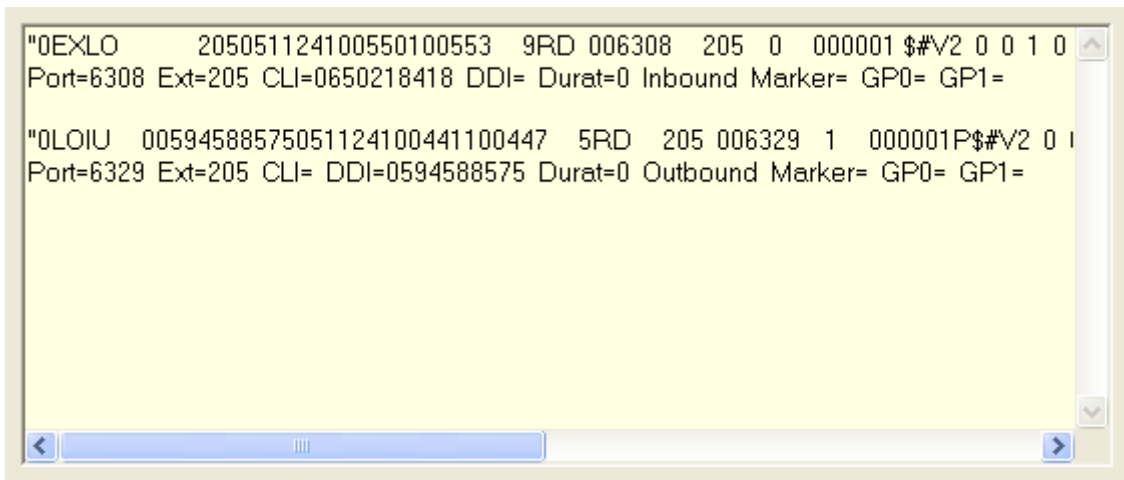
When a new PBX entry is created, this can be tested by selecting 'Test Input' from the main screen pull down menu.

A 'Test Input' editbox will appear:



The screenshot shows a web form with a text input field labeled "Test Input" and a "Send" button to its right.

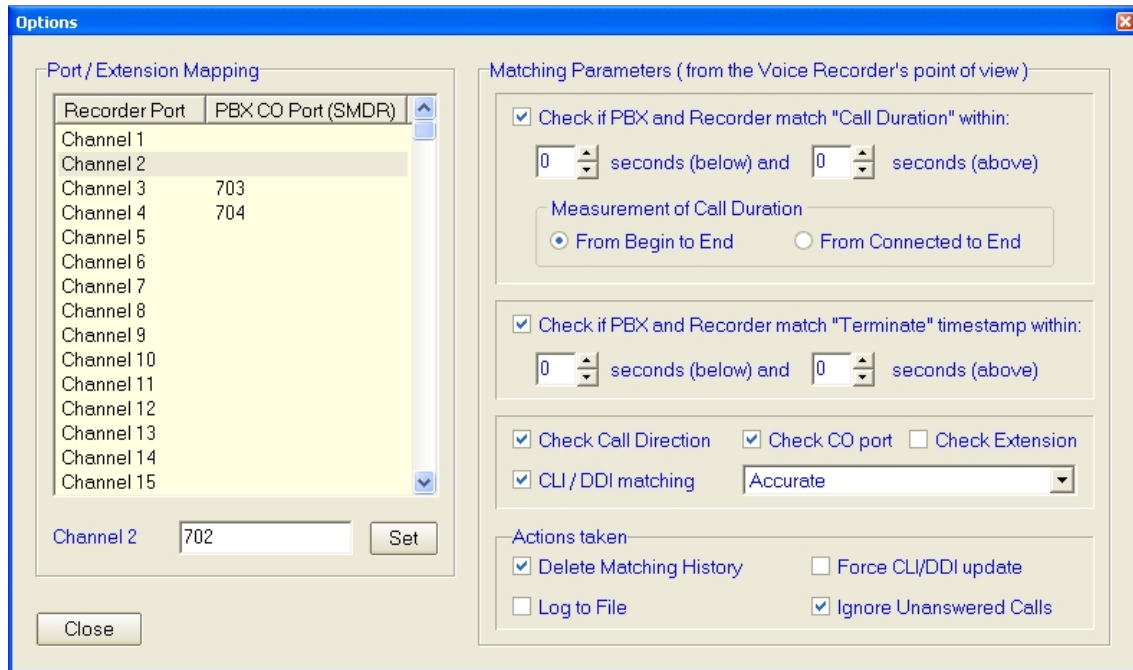
Check the 'Debug' checkbox and paste SMDR lines into the test input and click on **Send**. The raw SMDR input will be shown and the parsed interpretation will be shown:



```
"0EXLO 205051124100550100553 9RD 006308 205 0 000001 $#V2 0 0 1 0
Port=6308 Ext=205 CLI=0650218418 DDI= Durat=0 Inbound Marker= GP0= GP1=

"0LOIU 00594588575051124100441100447 5RD 205 006329 1 000001P $#V2 0 0 1 0
Port=6329 Ext=205 CLI= DDI=0594588575 Durat=0 Outbound Marker= GP0= GP1=
```

17.3 OPTIONS



17.3.1 Port Mapping

This panel defines the logical mapping between CO line numbers reported by the PBX and the actual CallCatcher ports at which a call is made. Use the **Set** button to configure the Port Mapping list.

17.3.2 Matching Parameters

Various decision parameters can be programmed here that will enable [CallLink](#) to find the most likely match between calls reported by the PBX and the [CallCatcher](#).

Decision parameters that are disabled will be ignored as well as those parameters that have their own checkbox unchecked.

A match is found when all parameter conditions have met within limits. In case multiple matches are found, multiple extension numbers will be integrated in the CallCatcher database in comma separated format. In general: the more parameters are active, the more accurate the match will be.

17.3.2.1 Call Duration

The call duration lower and upper time limits between the reported (PBX) and detected (CallCatcher) call duration are specified here. Also the type of call duration can be specified as being total call time or connect time.

17.3.2.2 Terminate Timestamp

The call terminate lower and upper time limits are specified here. Usually call terminate timestamps are accurate and should be incorporated as one of the vital parameters in the matching process.

17.3.2.3 Check Call Direction

Here the direction of the call can be taken into the matching decision. (Note: some board models without signalling support do not report call direction. In these situations this option should not be used)

17.3.2.4 Check CO port

An accurate or a less accurate CO Port Matching can be selected here from the dropdown box. Some PBX vendors do not supply correct or accurate CO line number details. In these situations it recommended have this decision parameter be ignored.

17.3.2.5 Check Extension

This is to be used in an environment where internal extensions are recorded instead of CO lines. In this case make sure that '**Check CO port**' is not checked and that '**Force CLI/DDI update**' is selected.

17.3.2.6 CLI/DDI Matching

Here the detected CLI or DDI of the call can be taken into the matching decision. (Note: some board models do not report CLI or DDI. In these situations this option should not be used)

17.3.3 Actions taken

17.3.3.1 Delete Matching History

This is an option that will delete those entries reported by the PBX that have resulted in a match.

17.3.3.2 Force CLI/DDI update

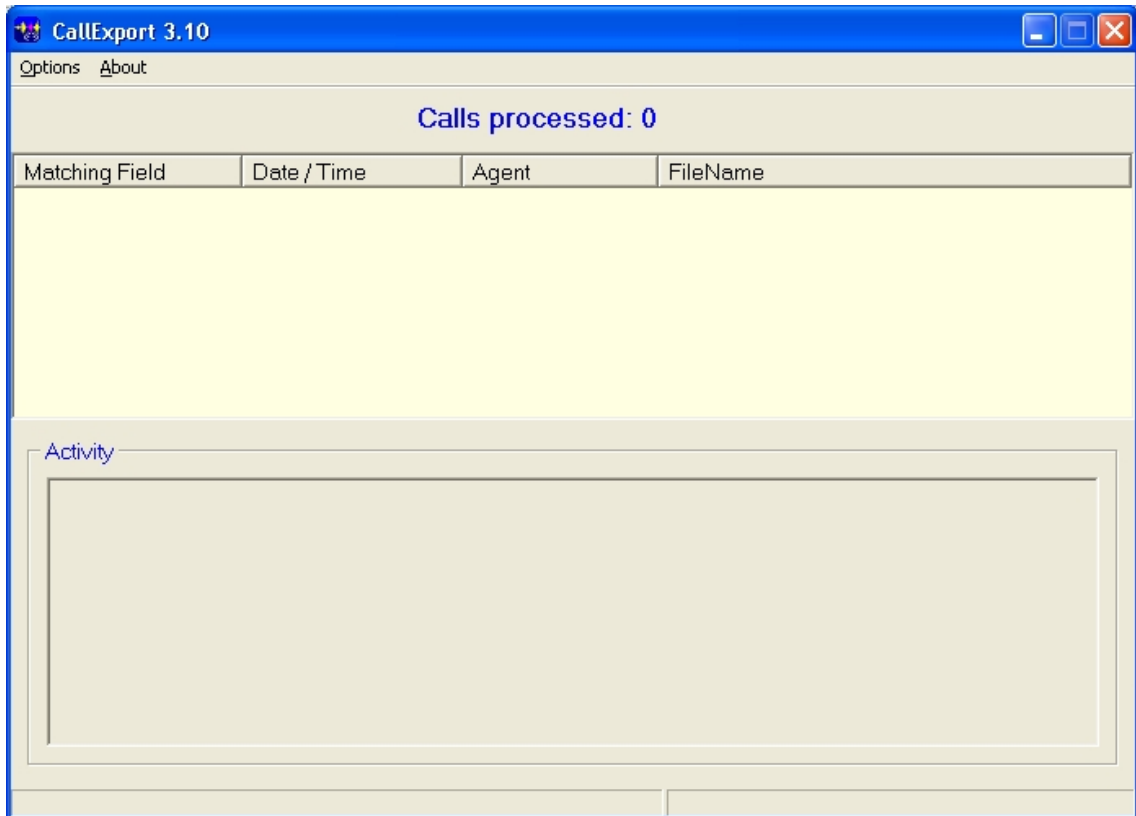
This is an option that will update the CallCatcher database with CLI/DDI information from the PBX in case this information is not available in the CallCatcher.

It is also to be used in case CallLink is used in an extension recording environment where the SMDR from the PBX can be used to append CLI/DDI information to the recording (see the '**Check Extension**' checkbox).

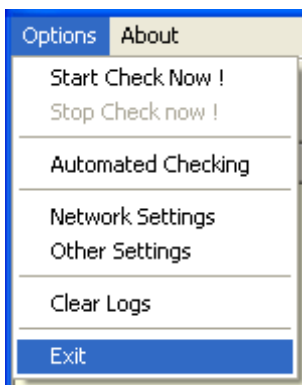
17.3.3.3 Ignore Unanswered Calls

Calls that are unanswered will not be incorporated into the matching history when this checkbox is selected.

18. CALL-EXPORT



CallExport is an optional client tool that can automatically extract recordings from the CallCatcher server and convert them into **.wav** or **.MP3** files in a predefined directory. The exported files will have CLI, DDI, Extension, Agent Name, Date, Time embedded into the filename for easy identification.



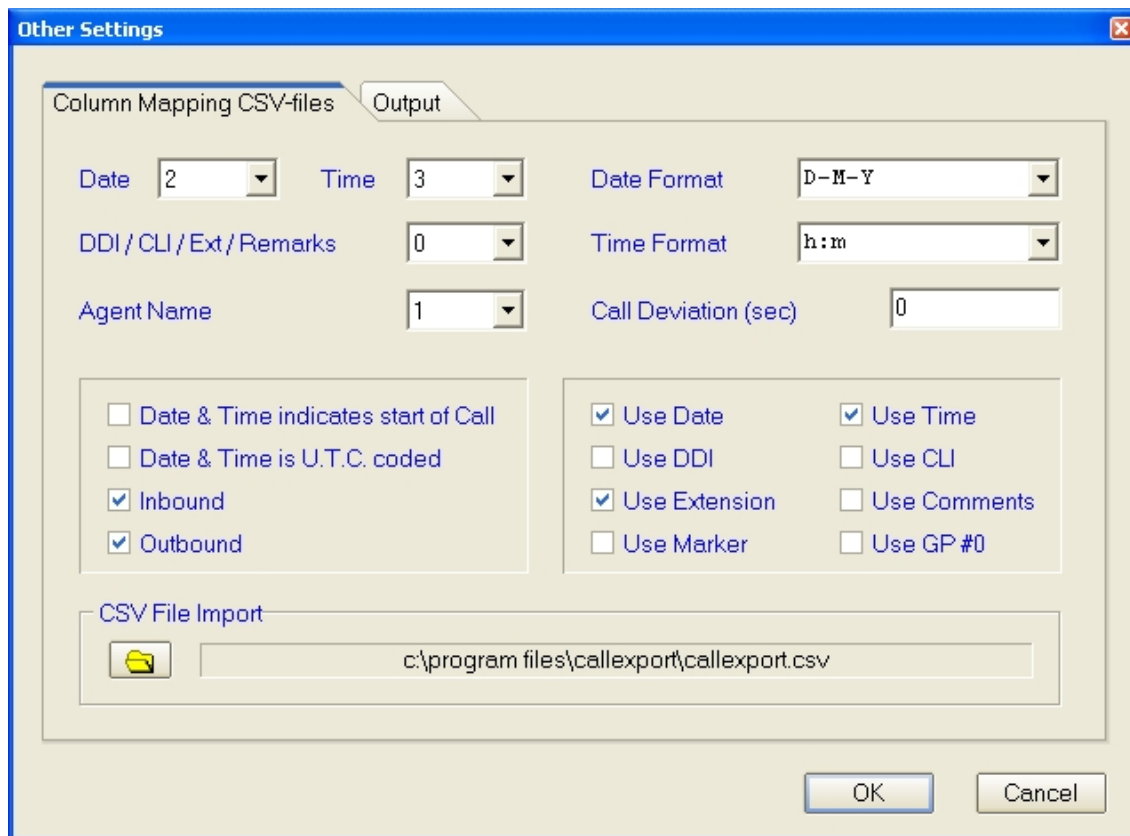
A CSV formatted input file (of which the column positions are programmable) can be specified that will be read by CallExport and used to find recordings by matching corresponding data. These settings as well as the CSV file input directory and **.wav / .MP3** output directories are configurable in '**Other Settings**' found in the pulldown menu.

Use '**Start Check Now !**' for manually starting the extraction and conversion process.

When '**Automated Checking**' is turned on, the CSV file input directory will be checked for changes in the .csv file. In case of a modified file it will automatically login to the CallCatcher server and start extracting and converting recordings.

With the column settings shown in the below screenshot the CSV file should have the following format:

3002,AgentName,01-12-2006,15:30



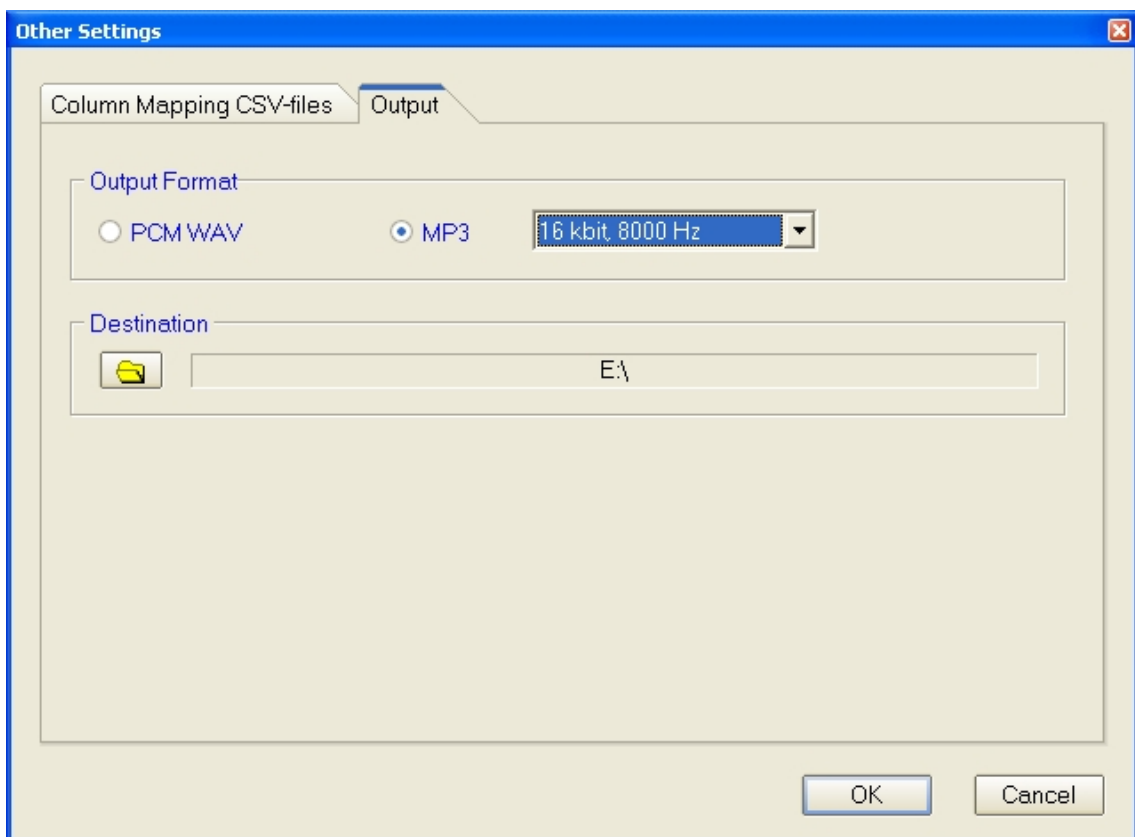
The extraction / conversion process can be done on '**Inbound**' and / or '**Outbound**' recordings. If none is checked, Voice Activated recordings will be assumed.

These checkboxes specify what the 'DDI / CLI / Ext / Remarks' column should represent. Make sure to select only one checkbox!

<input type="checkbox"/> Use DDI	<input type="checkbox"/> Use CLI
<input checked="" type="checkbox"/> Use Extension	<input type="checkbox"/> Use Comments
<input type="checkbox"/> Use Marker	<input type="checkbox"/> Use GP #0

The 'Use Date' en 'Use Time' checkboxes are used to specify if these columns should be used or not. Please note that when using these, the recordings must exactly match the Date and / or Time (within the programmed 'Call Deviation').

When using a Time parameter it is important to know if the Time column in the CSV file indicates the start of a call or the end of a call. Please configure the 'Date & Time indicates start of Call' checkbox accordingly.



Here the output directory and file format / compression is specified.

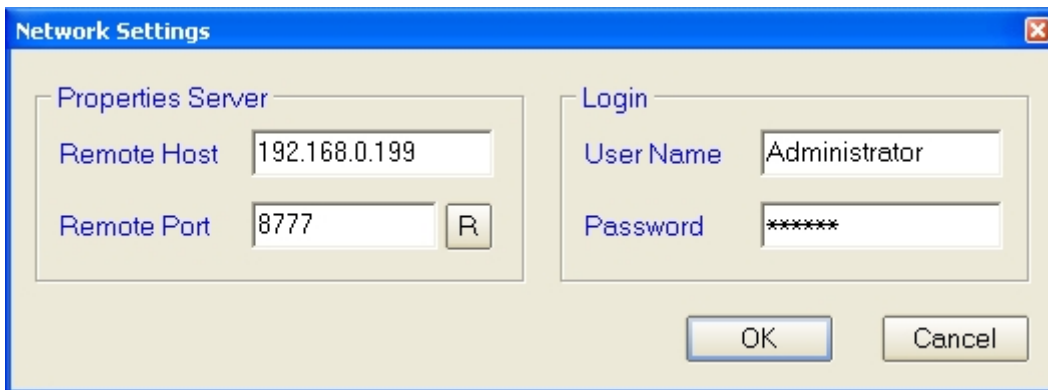
Note: The **.csv** file should contain at least two entries. In case the Date parameter is NOT used, it is always important to specify two dummy dates. This because CallExport has to notify the CallCatcher server to search for recordings within these two date limits.

Example **.csv** file that should find all recordings with an unknown date of extension 305 and assign the name 'Smart_Agent' to it:

305,Smart_Agent,01-01-1990 This is the true line with a start date.

000,dummy,31-12-2010 This is actually a dummy line for specifying the end date limit.

18.1 LOGIN



This '**Network Settings**' panel must contain the same '**User Name**' and '**Password**' as the user would have on the [CallCatcher](#) server in order to be able to login.

19. WIRING DIAGRAMS

Wiring diagrams are provided for the following PCI and ISA boards:

19.1 ANALOG PCI

- A-400/800-PCI Analog (Voltage Detect Parallel mode)
- A-400/800-PCI Analog (Loop Current Detect Serial mode)

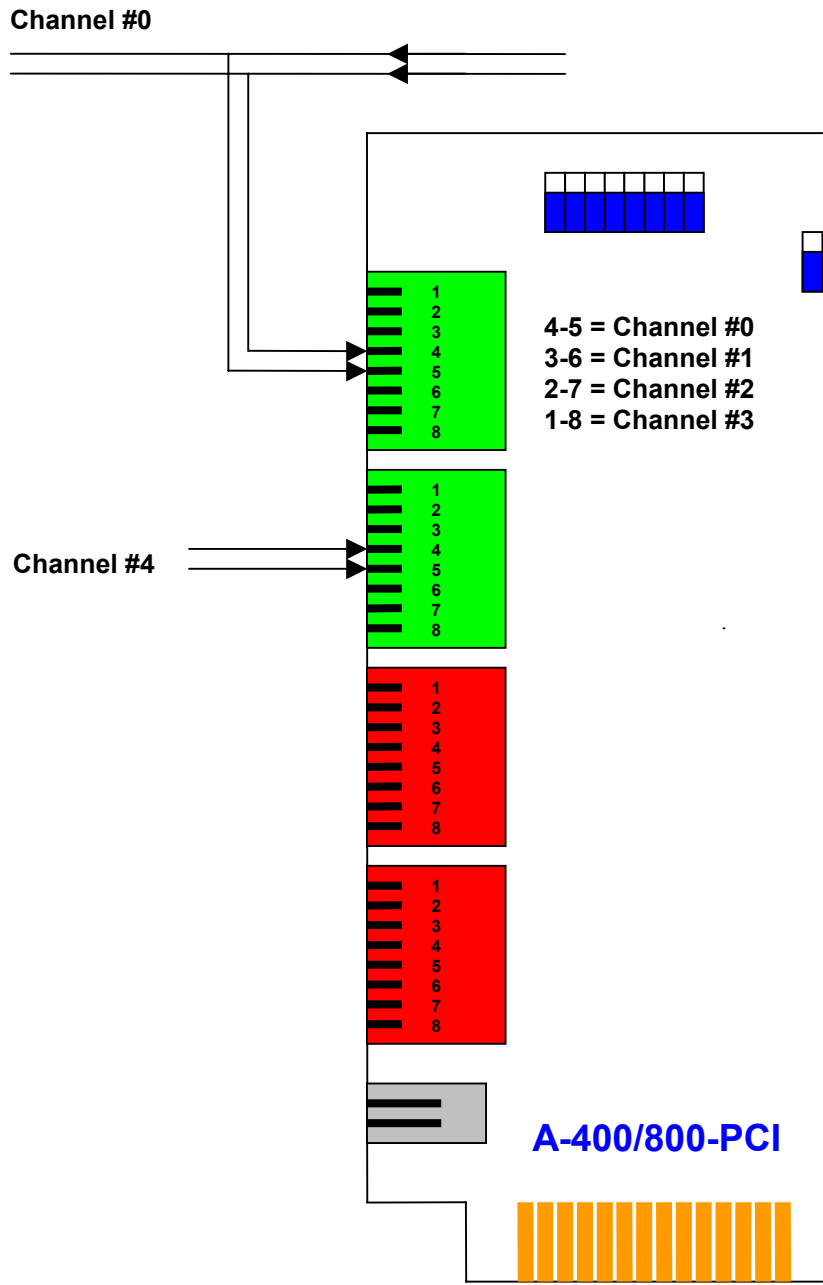
19.2 DIGITAL PCI

- DX-400/800-PCI 4/8 channel Digital
- IS-400/800-PCI 2/4 port S_o bus ISDN-2 (4/8 channels)

19.3 ISDN-30 PCI / PCI EXPRESS

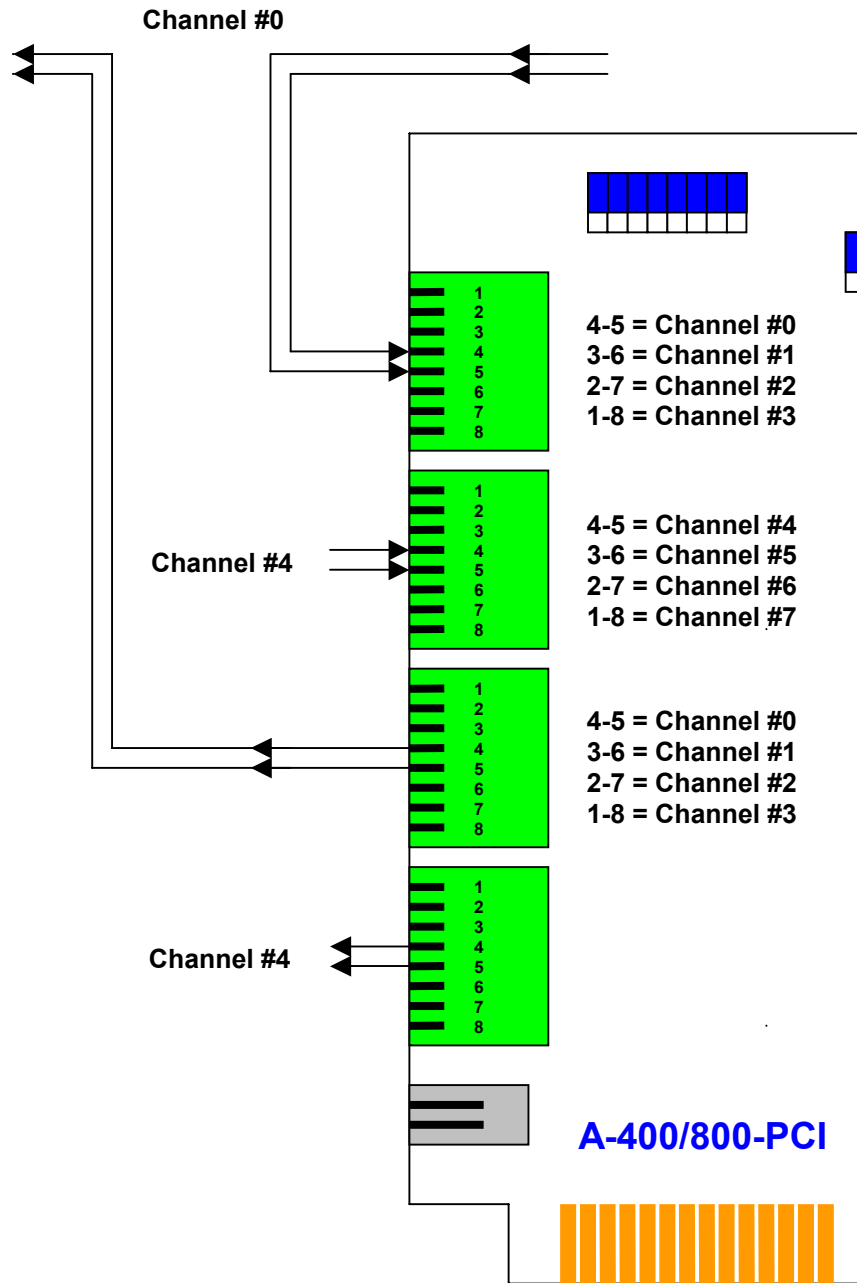
- IS-3000-PCI Primary Rate ISDN-30
- IS-3000-PCIE Primary Rate ISDN-30 PCI express
- IS-6000-PCIE Dual Primary Rate ISDN-30 PCI express

20. ANALOG PCI



High-impedance Voltage Detect Parallel Mode (RJ-45)

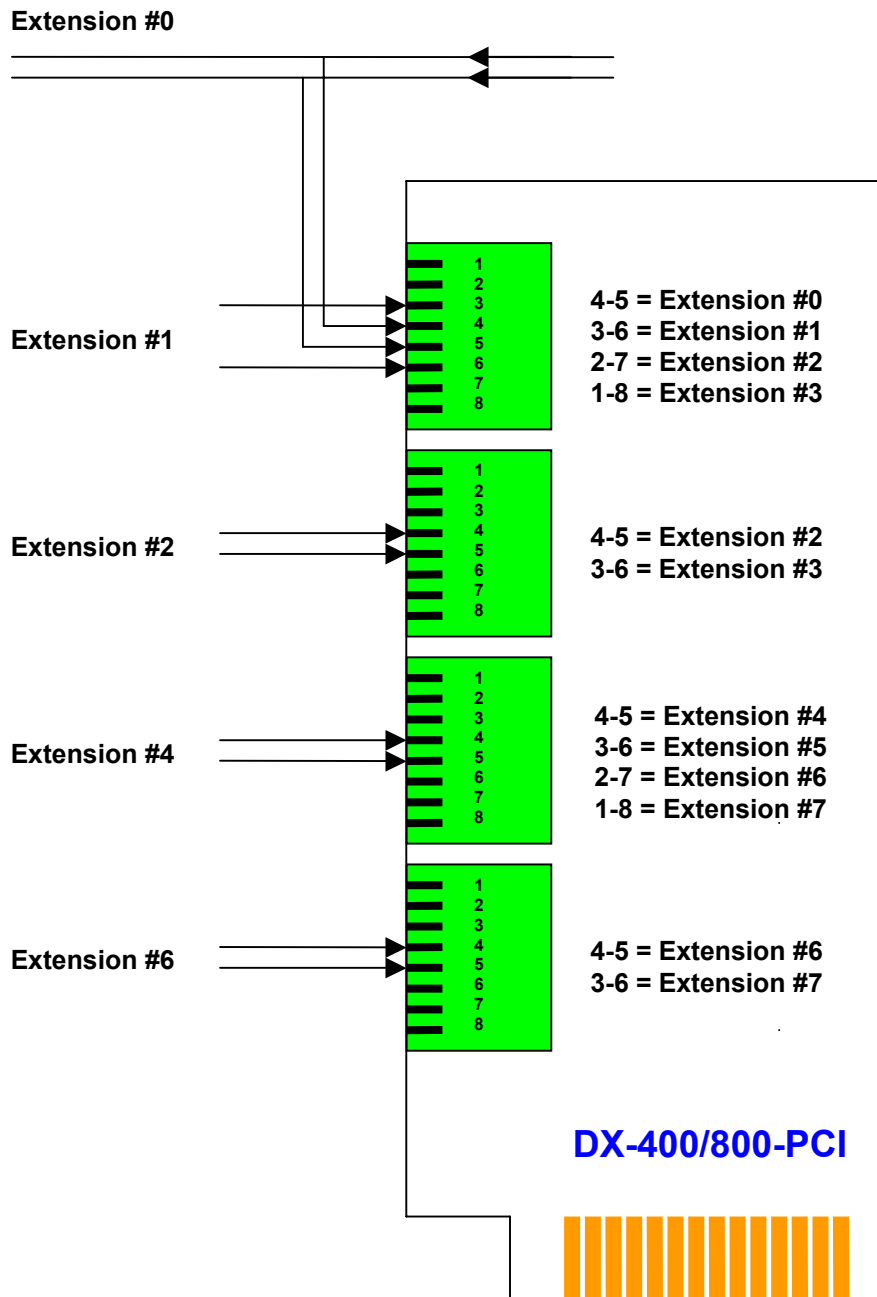
For Analog CO Lines, PBX Extensions or Voice Activated Audio Ports



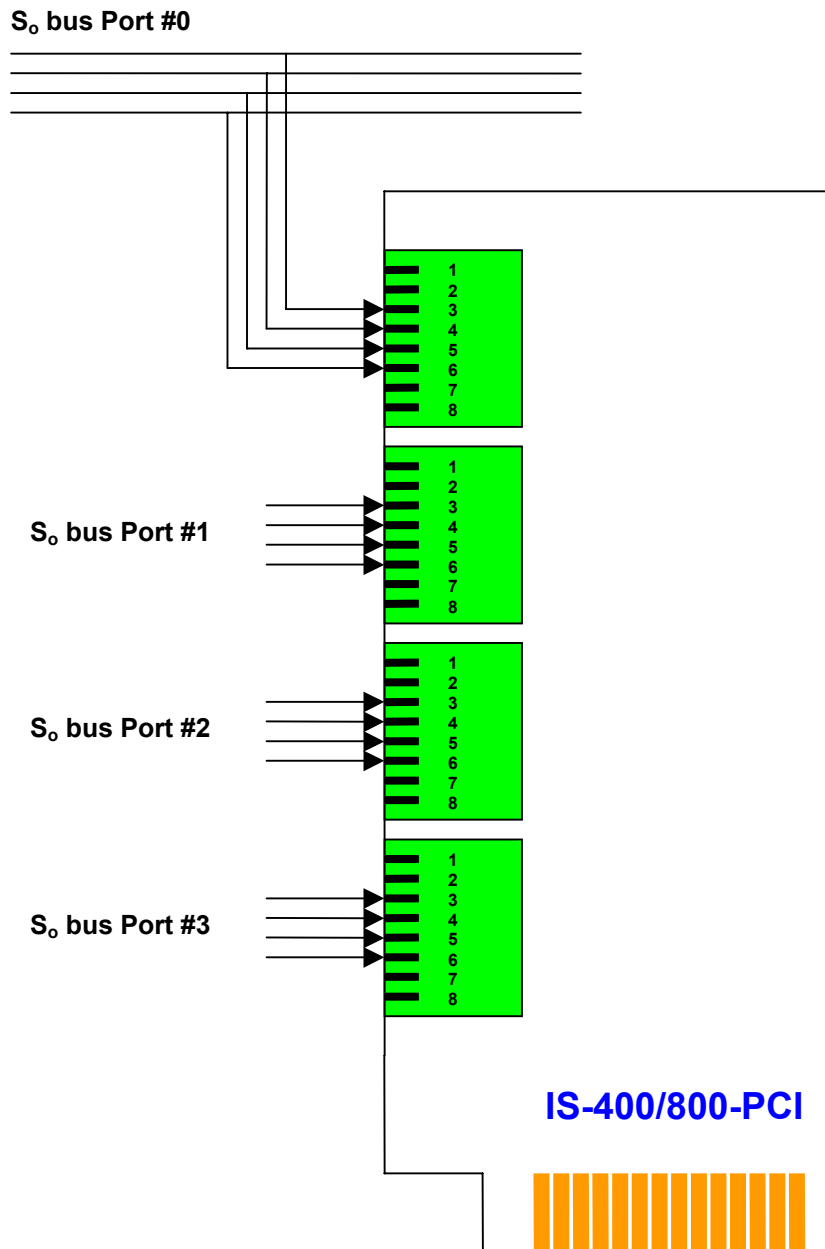
High-impedance Loop Current Detect Serial Mode (RJ-45)

For Analog CO Lines or PBX Extensions

21. DIGITAL PCI



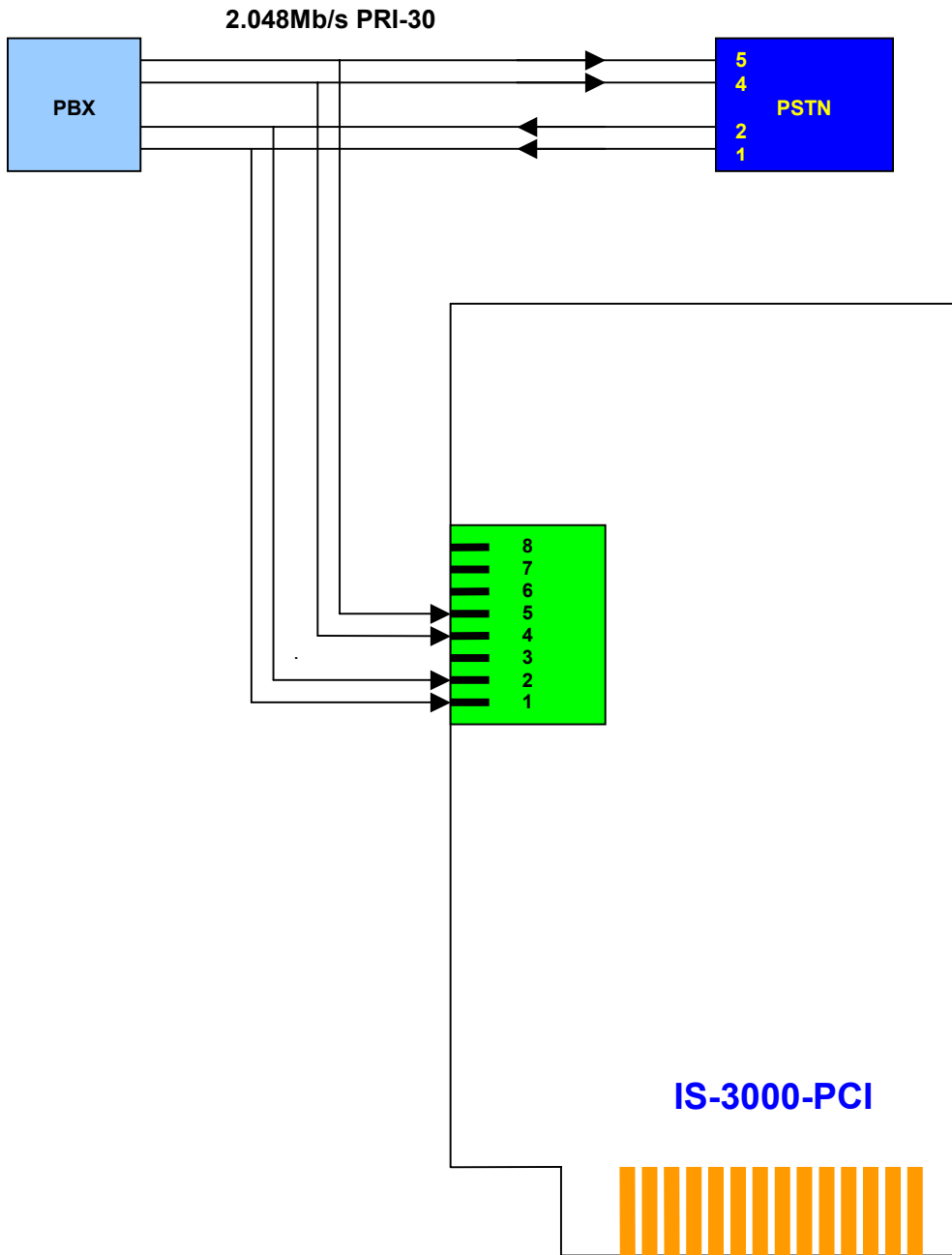
Digital Extension Parallel Mode (RJ-45) for Digital 2-wire PBX Extensions



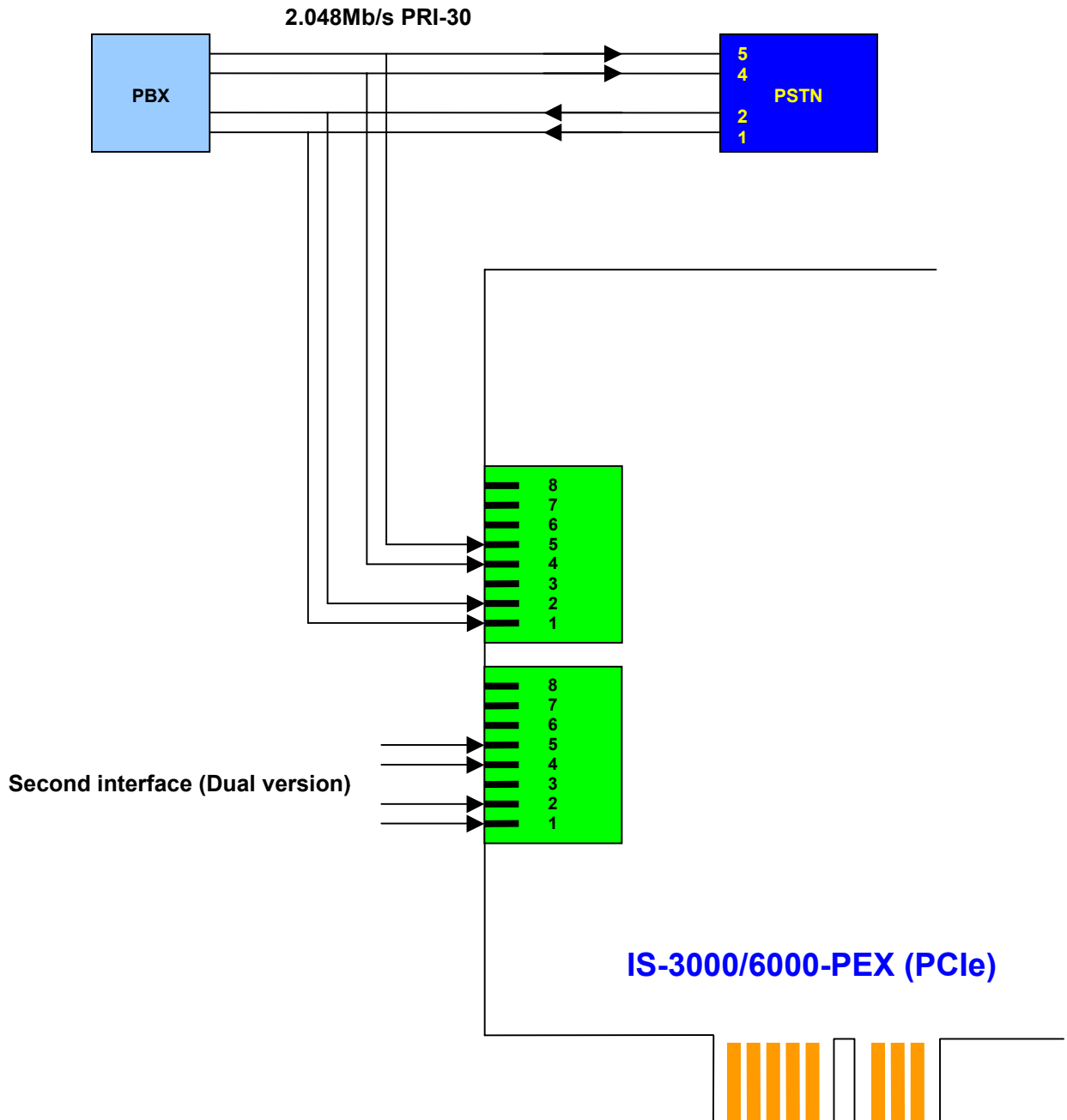
S₀ bus Parallel Mode (RJ-45)

For Basic Rate ISDN-2 CO lines or Digital 4-wire S₀ bus PBX Extensions

22. ISDN-30 PCI / PCI EXPRESS

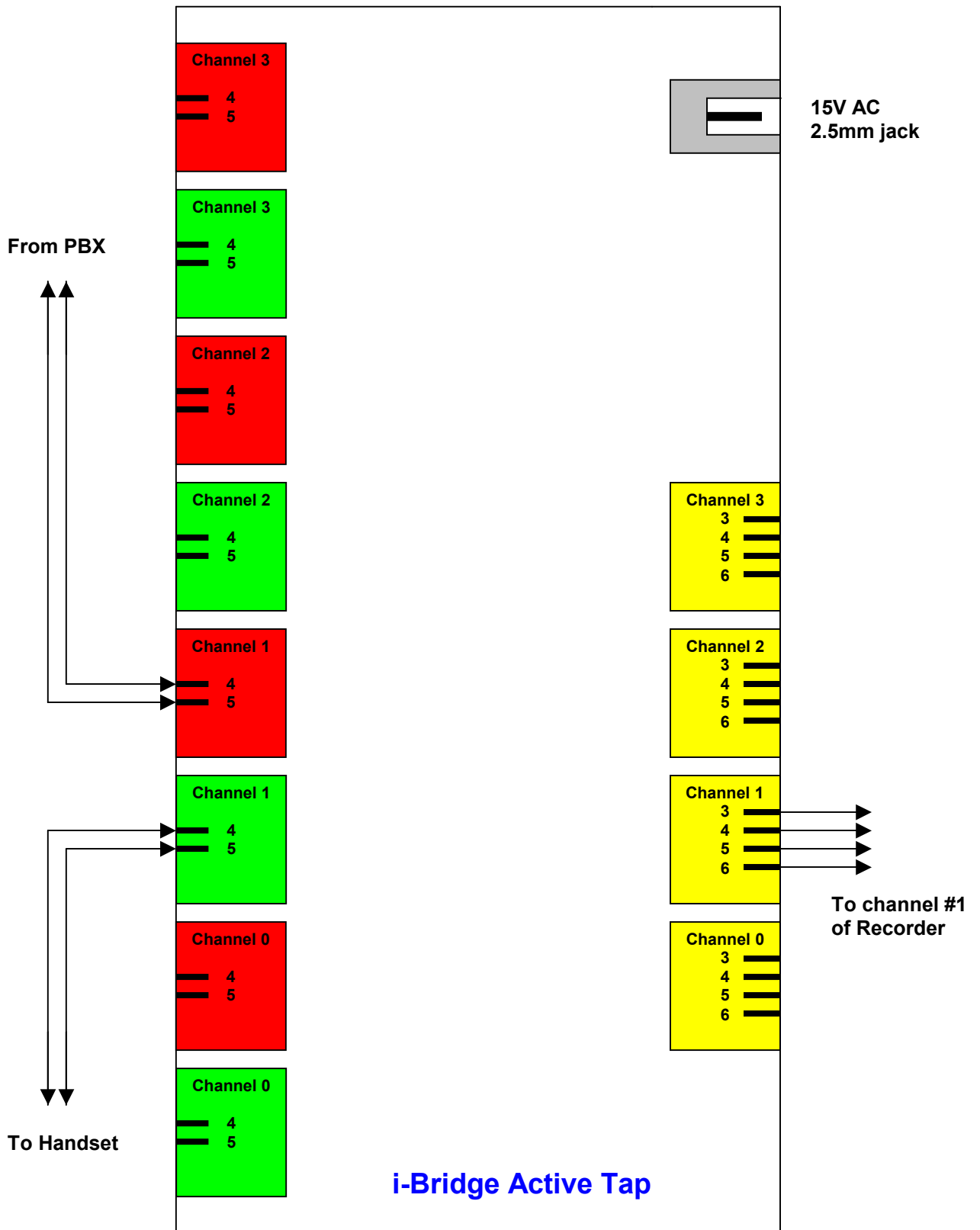


Primary Rate / E1 Parallel Mode (RJ-45) for PRI-30 ISDN / DASS-2 / E1 lines



(Dual) Primary Rate / E1 Parallel Mode (RJ-45) for PRI-30 ISDN / DASS-2 / E1 lines

23. SPECIAL INTERFACES



i-Bridge 4 channel Serial Active Tap for Avaya Index and Mitel PBX systems