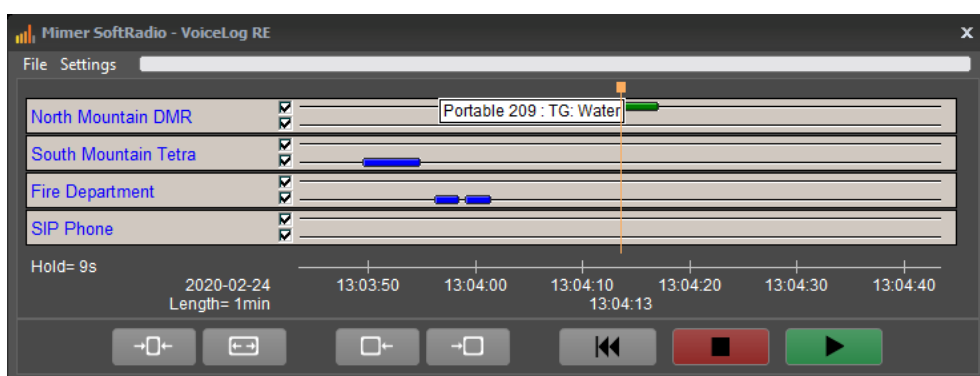




How to setup and use Mimer VoiceLog Mimer VoiceLog LE



Release date Sept 07, 2022

This guide will help with the installation and setup of your **Mimer VoiceLog** or **Mimer VoiceLog LE** system.

Please also refer to the web pages www.lse.se, www.lse.se/voicelog, and the FAQ: www.lse.se/mimer-softradio/faq/#TLOG

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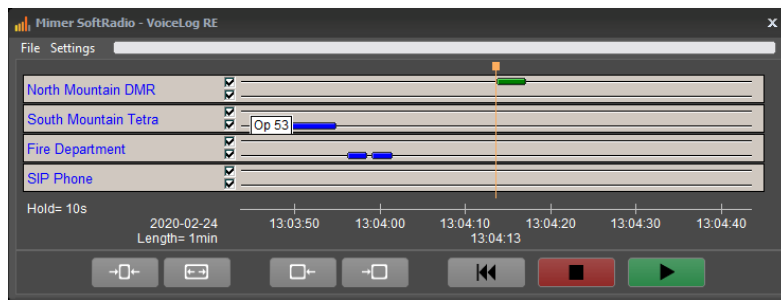
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2 General

Mimer VoiceLog Server is a component in the Mimer family of products for network operated 2-way radios.

Basically, the VoiceLog Server is used to record audio data to and from the IP-network connected radios and the dispatchers.



Example of VoiceLog panel with three radios and a phone connected and recordings made both from radio and from operator.

In the Mimer SoftRadio System the VoiceLog Server acts as a special purpose sound source and is configured at the client much like any radio. The SoftRadio client will identify it and create a VoiceLog panel.

When the client connects to the VoiceLog Server it will create a panel that displays all sound segments as small horizontal bars. From the panel the operator can select audio channels to listen to and place a cursor at the time to start a playback.

The client software will request the necessary data for its panel from the server, and the server collects information from its database and sends it back to the client for display. When an operator presses the playback button, the client sends a request to the server to get all relevant sound segments played as sound. This is then received by the client in a similar manner as any other Mimer sound.

The server saves all pieces of sound (called sound segments) as separate wav-files. These are standard audio files that can be played with Mimer VoiceLog Player, see below for details, or with the standard Windows media player and other multimedia players.

The server also stores information about each sound segment in a MariaDB SQL Server database called “Audio Log Database”.

The information stored is:

- ❑ Source ID of the sound
- ❑ Destination ID for the sound
- ❑ Start time
- ❑ Stop time
- ❑ File name for the related wav-file
- ❑ Radio ID (ISSI) and Talkgroup ID (GSSI) if available with incoming audio (new from version 4.0 of the VoiceLog)

2.1 Installed as a Windows Service

From version 4.0 and onwards the VoiceLog server software is installed as a Windows Service on the server. This means that it auto starts with the server itself and always runs in the background. If the server is rebooted, the VoiceLog will automatically start up again.

2.2 Mimer VoiceLog LE

Mimer VoiceLog is sold in two versions. The standard version limits the number of radios and dispatchers in the same way as the rest of the Mimer SoftRadio system.

Mimer VoiceLog LE has a limitation at max 4 dispatchers and 4 radios (or other devices).

Note that the LE-version does not have the storage of ISSI/GSSI numbers.

2.3 Older clients

If you are using a Mimer SoftRadio client older than 3.5.15.0 you need to turn on a setting in the VoiceLog server to support old clients. Or update the SoftRadio client.

3 Basic Configuration

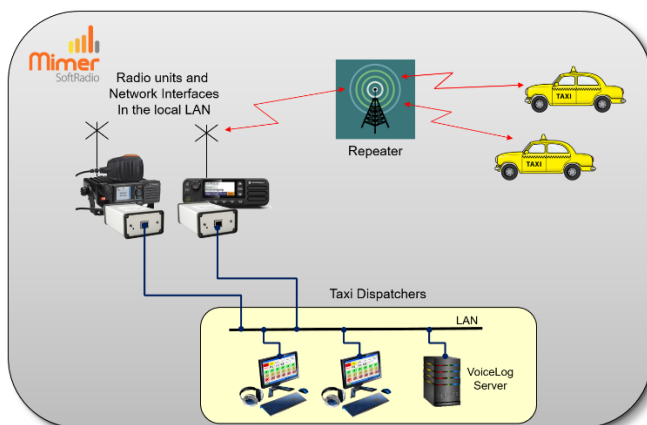
The Mimer VoiceLog will record radios and operators in the SoftRadio system.

3.1 Operators

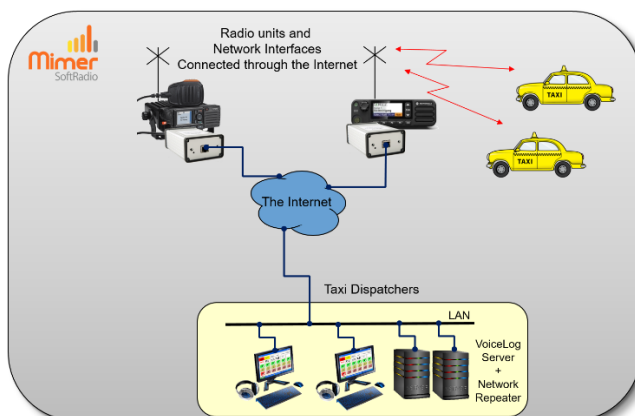
The operators can be connected both through a local LAN and through the Internet. All operators will be recorded and they can back track in their own recordings.

3.2 Radios and other devices

The radios and other devices that shall be recorded needs to connect through UDP to the VoiceLog server. This means that they need to be installed local in the same subnet of a LAN, or be connected through a Mimer Network-Repeater.



Drawing of a local setup, NetworkRepeater not needed



Drawing of a remote setup, with a Network Repeater.

4 VoiceLog Server installation

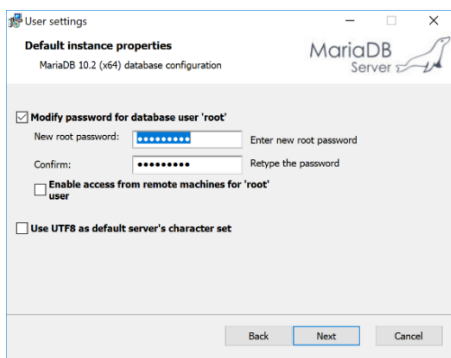
Install the software package from the supplied USB stick.

When prompted choose “Full installation with MariaDB SQL Server”.



Setup window

Set the password to “mimerroot”



You can leave the two boxes above unticked

4.1 Recommended hardware

We recommend running the software on a separate Windows Server or Windows PC. In small systems the server function may be placed on one of the operator PC's.

Any modern PC will have enough power to run the VoiceLog. We recommend a large hard drive, so that you don't fill it up too soon. The size of your system matters for how large the VoiceLog server needs to be. We recommend the following:

- A CPU similar to Intel Core i7 or Intel Xeon with at least 4 cores.
- Minimum 16GB RAM
- At least 500GB Hard disk. Larger for systems with much voice traffic and if data is to be stored for a long time.

- Windows Server 2019 or Windows 10.

In systems with for example a Mimer NetworkRepeater or a Mimer MapView, the server hardware can be shared between the applications.

When shared with Mimer MapView, that also uses a database, you only need to install MariaDB for the first application installed.

5 VoiceLog Server configuration

The main VoiceLog Server settings are configured using the Server settings dialogue. You find the settings on the VoiceLog Server Console, see below.

“Name Label” is the name shown at the top of the Mimer Device panels in SoftRadio.

“Server ID” is the ID used to identify the VoiceLog Server in the Mimer SoftRadio System. This is entered in “Mimer Connections Setup” at the client installation.

“TCP port” is also used in the “Mimer Connections Setup” to connect the clients to the VoiceLog Server.

“Password” is used when setting up the clients. The password shall have max 8 characters.

“Base Folder” is where the recorded .wav files are stored. Under this base folder are sub directories created for each year, month and day as selected by the tick boxes.

“Timeout...” tells how long silence (in milliseconds) must be detected before a file is closed and recorded as a separate sound segment.

“Support clients...” Choose this alternative if you have SoftRadio clients that are older than version 3.5.15.0.

The MariaDB (MySQL) settings are self-explanatory. Those shown in the picture are the ones used for a standard installation.

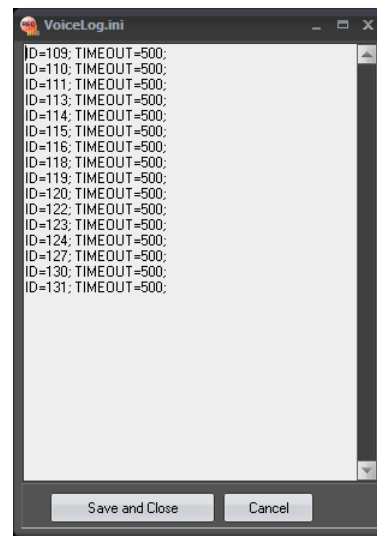
5.1 Audio sources for recording

5.1.1 Radios and other devices

The devices to record are stored in a file reached through “Settings” and “Edit recorded units...”. on the VoiceLog Server Console, see below.

Each row in the file shall begin with “ID=” followed by the Mimer Network Interfaces ID-number.

The second parameter on each row tells how long silence (in milliseconds) must be detected before a file is closed and recorded as a separate sound segment.



5.1.2 Dispatchers

All connected dispatchers will automatically be recorded. No setting needed in the server.

5.2 Sources in local network

All devices (not dispatchers) to record must be in the same LAN Subnet as the VoiceLog server. This means that devices in other networks, for example connected over the Internet, needs to be connected to a Mimer Network Repeater.

Large systems that have a Mimer RadioServer at the radios will also need to have a Mimer NetworkRepeater to be able to connect to the VoiceLog.

6 Running the application

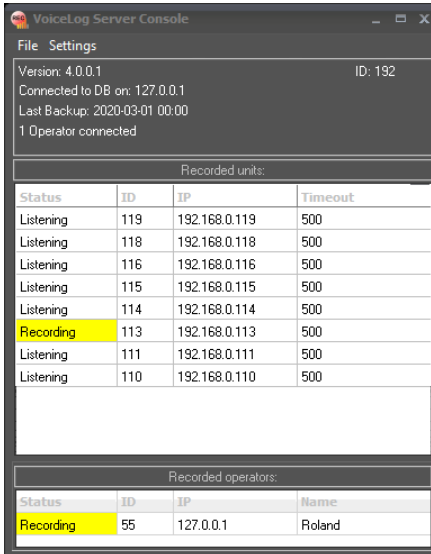
The server software is installed as a Windows Service and auto starts with the server itself and then runs in the background.

Older versions (before 4.0) were not installed as a Service and needed to be started manually.

6.1 Console Window

There is a “VoiceLog Server Console” window, that can be opened. It does not need to be active for the server to run.

From the console window you access all settings for the server.



The screenshot shows the VoiceLog Server Console window. It has a menu bar with 'File' and 'Settings'. The main area displays version information (4.0.0.1), database connection status (127.0.0.1), last backup time (2020-03-01 00:00), and the number of operators connected (1). Below this are two tables. The first table, 'Recorded units', lists units with columns for Status, ID, IP, and Timeout. The second table, 'Recorded operators', lists operators with columns for Status, ID, IP, and Name. In both tables, the first row is highlighted in yellow.

Recorded units:			
Status	ID	IP	Timeout
Listening	119	192.168.0.119	500
Listening	118	192.168.0.118	500
Listening	116	192.168.0.116	500
Listening	115	192.168.0.115	500
Listening	114	192.168.0.114	500
Recording	113	192.168.0.113	500
Listening	111	192.168.0.111	500
Listening	110	192.168.0.110	500

Recorded operators:			
Status	ID	IP	Name
Recording	55	127.0.0.1	Roland

*VoiceLog Server
Console window*

Each monitored device is listed with its status. If status is “Listening” then the connection is monitored. If status is “Recording” then data is being recorded.

The operators are listed as soon as they connect. When they shut down their application they are automatically removed.

7 Recommended settings

We have found that some standard Windows settings might come in conflict with the data saving. The following steps are there for recommended actions on the server running Mimer VoiceLog.

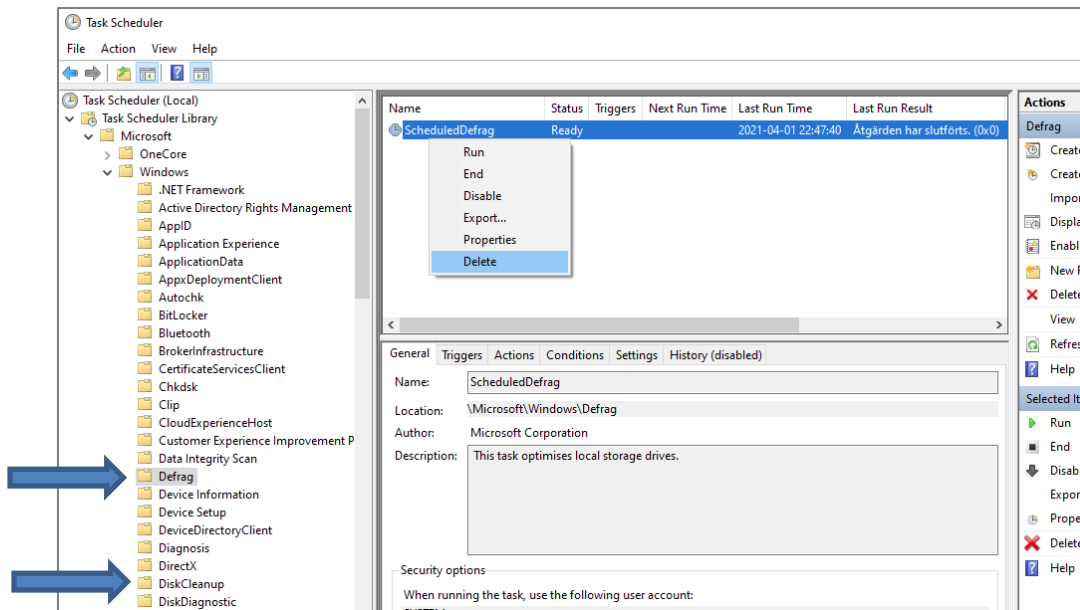
7.1 Turn of antivirus scanning

Most computers do automatic antivirus scanning. We recommend this to be turned off. This is done differently depending on what type of antivirus is installed.

7.2 Turn of disk defragmentation

Windows has an automatic defragmentation function. We recommend this to be turned off.

Open “Task Scheduler” by searching in the Start menu. Click down in the folders until you reach: “Microsoft -> Windows -> Defrag “, se picture below.



Select "ScheduledDefrag" right click and then "Delete".

7.3 Turn of disk cleanup

Windows has an automatic disk cleanup function. We also recommend this to be turned off.

It is done in the same way as the defragmentation above.

8 Problems with the VoiceLog

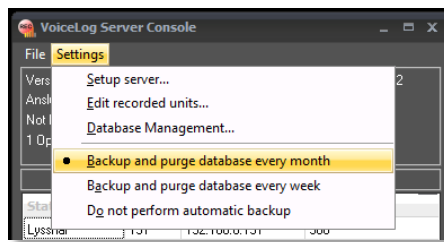
There is a webpage with questions and answers where we collect information that can be helpful.

www.lse.se/mimer-sofradio/fag/#TLOG

9 Automatic backup

Under the settings menu there are selections for an automatic backup of the data base.

With the selection illustrated, it will be done just after midnight at the start of the month. All old records are backed up and then purged from the database if this function is turned on.



It is strongly recommended to turn on the automatic backup. The database might otherwise grow so large that it slows down the process.

The automatic backup performs two steps monthly or weekly, as selected from the menu shown above:

1. A copy of the oldest part of the database table is made and given a describing name containing date information.
2. The part of the table that was copied is deleted from the table (purged) and the remaining table is packed so it will perform optimally.

This process will keep the database table small enough to allow good performance.

If the monthly backup is selected, the previous month is kept and the older records are backed up and deleted.

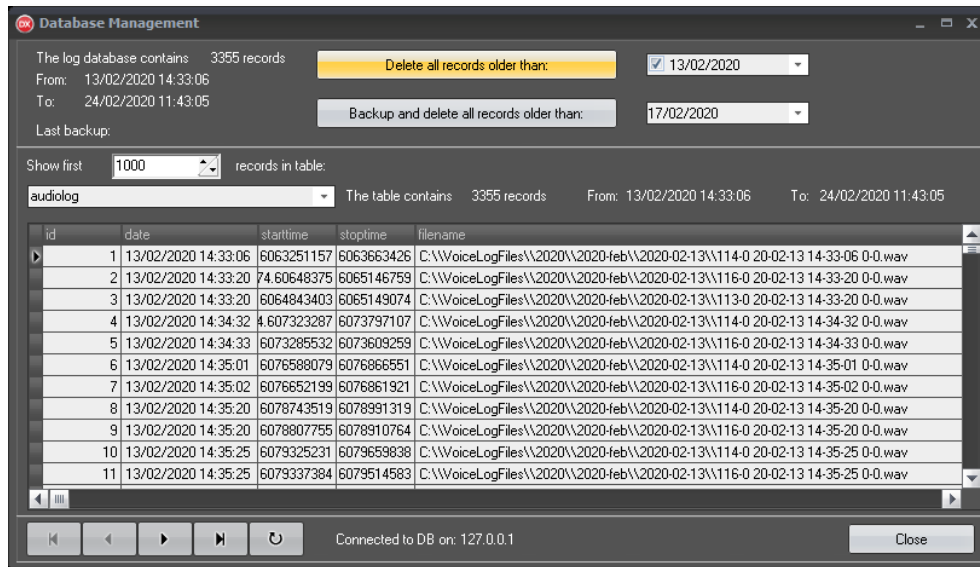
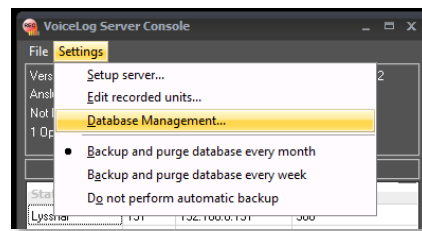
Similarly, if the weekly option is selected, the past week is kept.

Note: This process does not touch the audio files. They will still remain on the disk.

Over time you should also delete old audio files to prevent the disk from being full. But this is a fully manual operation.

10 Manual Database Administration

By selecting Settings – Database Management from the menu you get a screen with options for backing up and purging the database. The use of these should be very straight forward and self-explanatory.



The main grid where data in the available database tables can be viewed.

10.1 Backing up old data in the database

There is a button for making a backup copy of part of the data to a new table and deleting it from the current table. The backup data table will be a separate file in the MySQL server's data directory where it can easily be found by a backup system.

Automatic backups can also be selected.

If weekly backups are selected, data older than 2 weeks will be copied to a backup table and removed from the working table after midnight every Monday.

If monthly backups are selected, data older than 2 months will be copied to a backup table and removed from the working table after midnight on the 1:st of every month.

Please note that none of these functions touches the sound segment wav- files in the wav-file directory structure.

These can be moved and deleted using standard Windows file handling.

10.2 Deleting old data

There is also a function to delete old information from the Audio Log Database table without backing it up.

Deleting old data is necessary to prevent the database table from being too large.

Please note that none of these functions touches the sound segment wav- files in the wav-file directory structure.

These can be moved and deleted using standard Windows file handling.

10.3 Location of the database files

The database data files are by default placed in the directory:

C:\Program Files\MariaDB 10.2\data\voicelogdb\

This directory is defined by the settings in the MySQL “my.ini” file in:

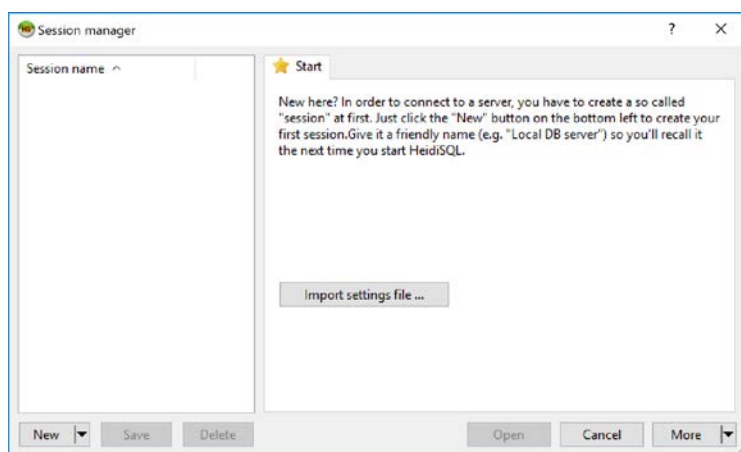
C:\Program Files\MariaDB 10.2\data\

All information on these settings can be found on the Internet if required.

10.4 MariaDB SQL Database

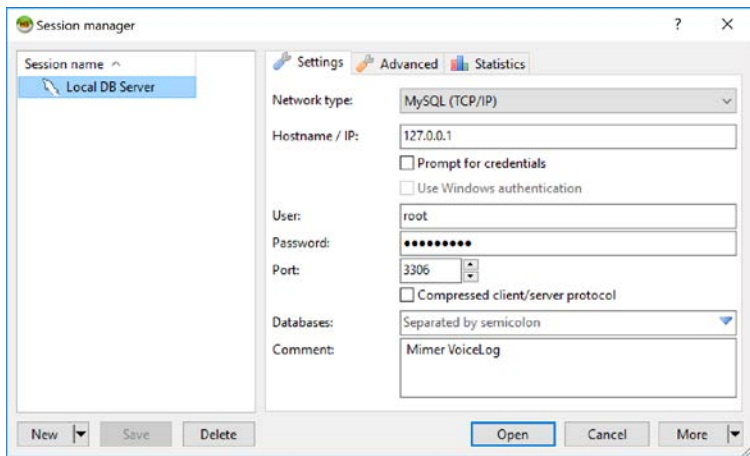
MariaDB is a free database created as a fork from the well-known MySQL database, and is fully compatible with MySQL. If you are familiar with MariaDB or MySQL and would like to work with the database on a deeper level, you can start the included database manager “HeidiSQL” from the Programs Menu, or the desk top short cut. You will find it in the start menu under “MariaDB 10.2”.

You will be asked to log on at the following window:

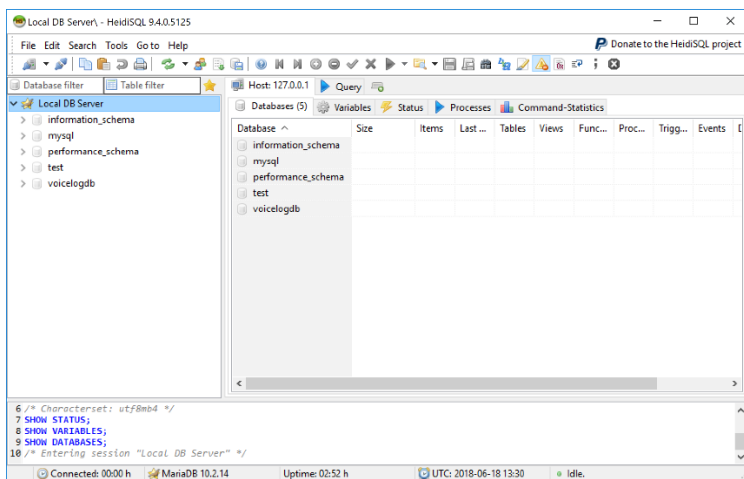


First time login menu

Create a new session as described. The default username is “root” and password is “mimerroot”. After the first time, you will go directly to the window below.



Session setup for the local server



Heidi SQL management window

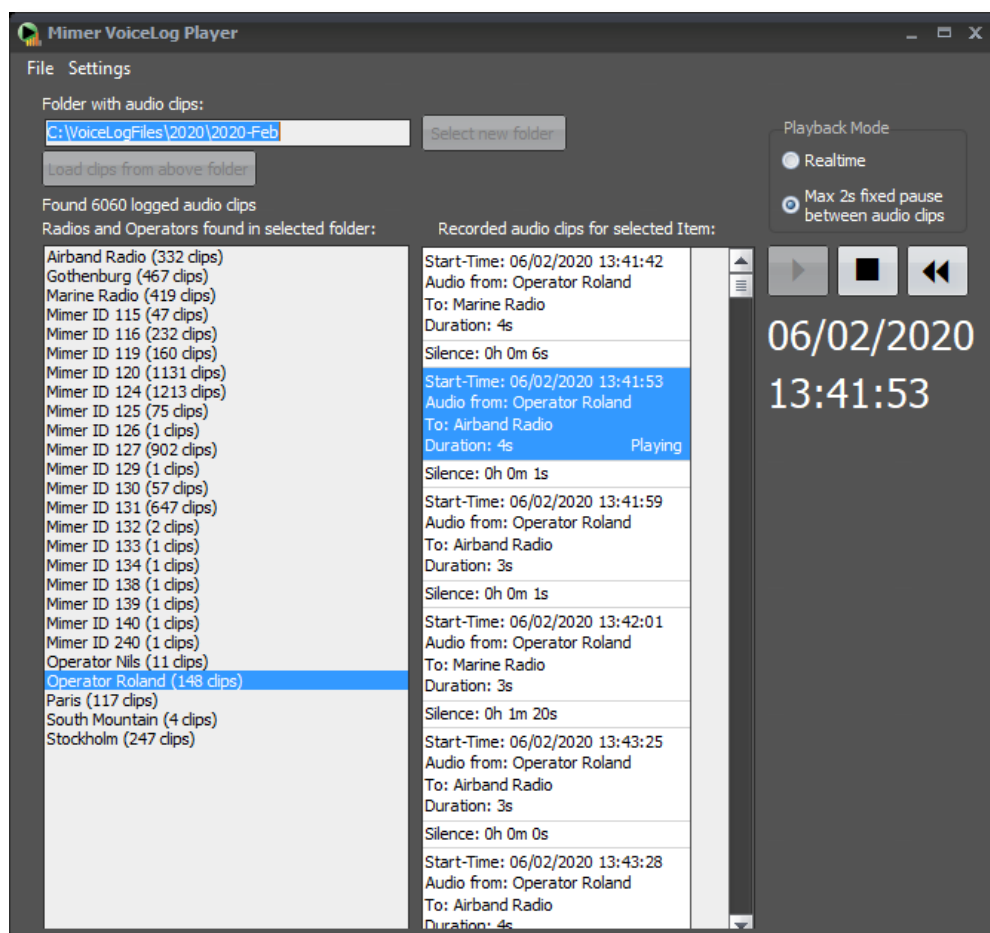
11 VoiceLog Player

To make it easier for an administrator to play back the recorded audio files there is a small utility called **Mimer VoiceLog Player**. (Included in VoiceLog deliveries from mid-June 2018)

You will find VoiceLog Player under the Start menu / Mimer VoiceLog Server.

With the software you can select audio files from the server and easily sort them by date and time as well as dispatcher and radio.

The player has its own setup where you can give each radio and dispatcher a name instead of the technical ID numbers that the recordings have.



Mimer VoiceLog Player window

11.1 Selection of play back files

Select the folder where the files you would like to replay are located and then click on “Load clips from the above folder”. Try to navigate so that you don’t get too many files. Selecting all recordings in all sub-folders may cause it to take some time to load.

11.2 Listen to clips

Select a dispatcher ID or a radio ID and all clips with that ID will be shown in the list. In time order. Scroll the list to the time of interest.

Double-Click the clip in the list or click the play button.

The next clip will play automatically after the first has ended.

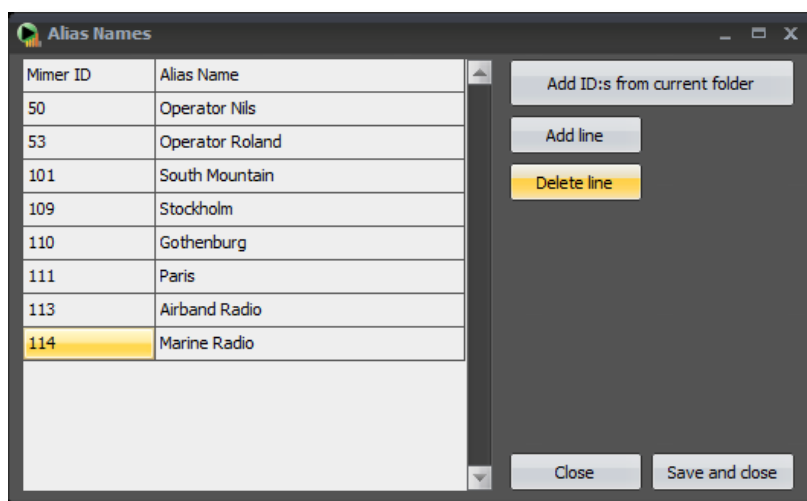
11.3 Pause time

You can select either to have the actual pause time between clips, select “Realtime”, or to have a pause of max 2 seconds between each replay, select “Max 2s fixed...”.

11.4 Alias names

Instead of showing the technical ID’s of the dispatchers and radios you can change them for alias names.

Under “Settings” there is a selection “Edit Alias list”.



Edit Alias list menu

Here you can change each Mimer ID number for an alias name of your choice.

Clicking the “Add ID’s from current folder” will load the ID numbers that are used in the current folder that you have selected for listening. You can also manually add and delete lines with ID’s and aliases.

11.5 External use

If for example someone external needs to follow up an event, audio files from that day can be copied from the server to a CD/DVD/USB and sent over together with the VoiceLog Player, making it easy for anyone to go through the event.

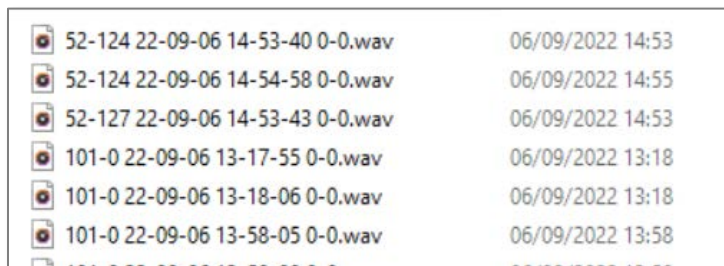
12 Storage of the audio files

The actual audio files are stored here: C:\VoiceLogFiles, if this has not been changed during setup.

There is one folder created for each year, each month and each day. This can also be changed during setup.

12.1 List of audio files

The recorded files in a day's folder can look like this.



52-124 22-09-06 14-53-40 0-0.wav	06/09/2022 14:53
52-124 22-09-06 14-54-58 0-0.wav	06/09/2022 14:55
52-127 22-09-06 14-53-43 0-0.wav	06/09/2022 14:53
101-0 22-09-06 13-17-55 0-0.wav	06/09/2022 13:18
101-0 22-09-06 13-18-06 0-0.wav	06/09/2022 13:18
101-0 22-09-06 13-58-05 0-0.wav	06/09/2022 13:58

Looking at the first line; an operator is transmitting:

- 52, The Mimer-ID number of the operator transmitting
- 124, The Mimer-ID number of the radio the transmission was made on
- 22-09-06, Year-month-date
- 14-53-40, Hour-minute-second
- 0-0, No ISSI or GSSI registered

The fourth line looks a bit different; a radio is receiving:

- 101, The Mimer-ID of the radio that was receiving
- 0, Meaning that it goes to all operators



125-0 22-09-06 14-53-07 209-101.wav	06/09/2022 14:53
125-0 22-09-06 14-53-42 209-101.wav	06/09/2022 14:53
125-0 22-09-06 14-55-00 209-101.wav	06/09/2022 14:55
127-0 22-09-06 08-01-50 0-0.wav	06/09/2022 08:01
129-0 22-09-06 14-01-33 0-0.wav	06/09/2022 14:01

Above, radio with Mimer-ID 125 have received a message from ISSI 209 on talk group GSSI 101.

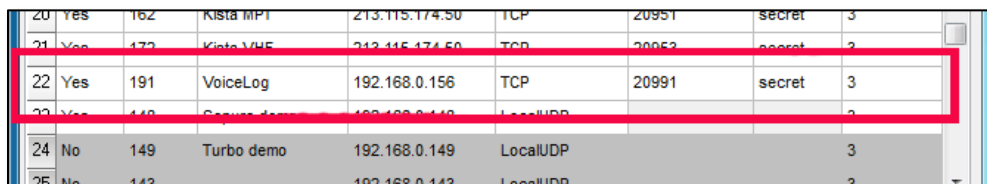
13 Client installation

The VoiceLog Server is defined in the clients “Mimer Connections Setup” in the same way as all the radios.

(Early versions of SoftRadio needed a special VoiceLog option to be installed. It is now included in all SoftRadio installations (since version 3.4.14). Without the option in the early versions no VoiceLog panel will be visible to the operator and no recordings from the operator will be made.)

13.1 Server in local LAN

All connections to the VoiceLog server are made with TCP (never UDP), also in a local LAN. The ID, IP, TCP port and password needs to be filled in according to the VoiceLog server settings.



20	Yes	162	Kista MP1	213.115.174.50	TCP	20951	secret	3
21	Yes	172	Kista VHF	213.115.174.50	TCP	20952	secret	2
22	Yes	191	VoiceLog	192.168.0.156	TCP	20991	secret	3
23	Yes	140	Sepura demo	192.168.0.140	LocalUDP			2
24	No	149	Turbo demo	192.168.0.149	LocalUDP			3
25	No	143		192.168.0.143	LocalUDP			3

Example of setting in “Mimer Connections Setup with the server in the same Subnet as the operator PC”

13.2 Server in remote LAN

If the VoiceLog server is placed in another Subnet than the operator PC, you shall fill in the IP address of the router in the other subnet. In the routers between the nets you need to set up port forwarding to the VoiceLog server or by other means set up a route so the server can be reached.

13.3 Hidden installation

It is possible to install the VoiceLog so that each operator (and the radios) are recorded, but without the operators having a visible replay menu. The files are then only available from the server, by an administrator.

This requires some “deep” settings in the operator PC setup, please ask for support if this option is wanted.

13.4 Operator review time

As a default the operator can review recordings that are 2 hours old. This can be set between 1-168 hours. The setting is found under “Settings” in the virtual panel for the VoiceLog.



14 VoiceLog - Quick start guide

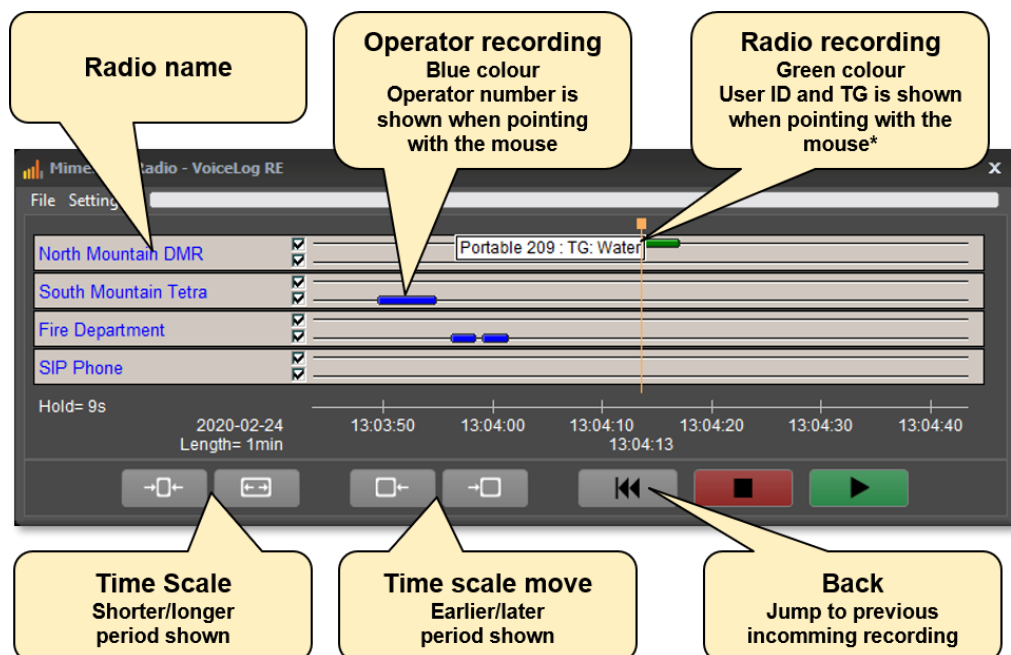
The VoiceLog is shown as one of the devices in Mimer SoftRadio along with the radios etc.

You can listen to the last incoming message by clicking the “Back Track” button and then the “Replay” button.



For more details you can click the “Show VoiceLog” button and access the VoiceLog device panel.

In the device panel you can listen to incoming and outgoing messages for each radio, change the time scale etc.



*ID and TG only available when the radio system presents it.



Proudly made in Sweden by

LS Elektronik AB

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