televic
conference

# TReX

## **T**elevic **Re**cording Matri**X**

User's Manual

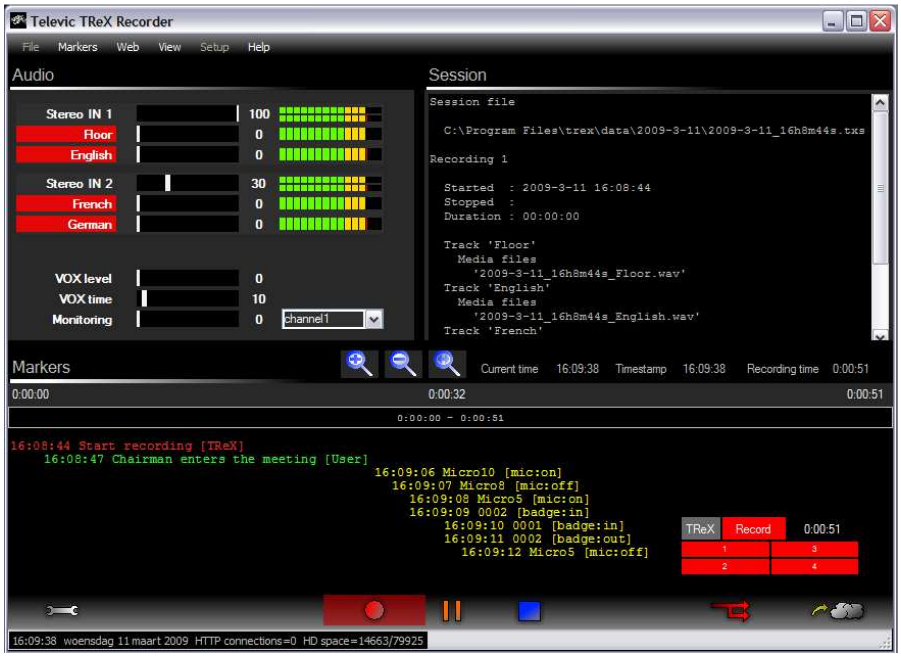
| | |
|---|---|
| Title | TREX – User's Manual |
| **Author** | YDW - EVC |
| **Date** | 2011-09-13: remark: order of starting applications |
| **History** | 2011-08-12: Change order of chapters<br>2011-05-27 : correction page 47<br>2010-11-02: Updated with TReX 1.13<br>2010-07-06: Updated with TReX 1.12<br>2010-03-25: Updated recorder (VOX, control)<br>2010-02-11: Updated with TReX 1.11<br>2009-07-10: Updated with TReX 1.10<br>2009-05-04: Initial version. |

# Contents

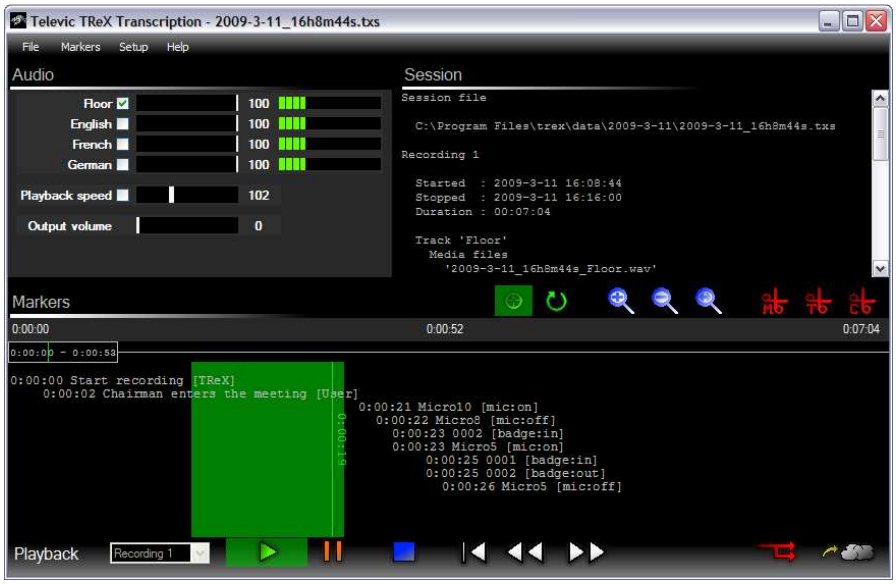
# Section 1 – Overview

## 1. TReX

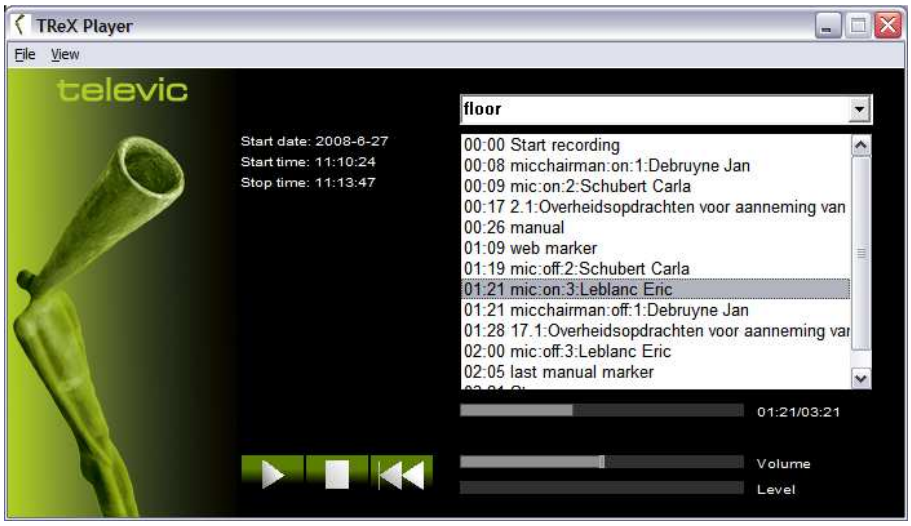
- The **T**elevic **R**ecording Matri**x** is a PC solution mainly targeted towards conference recording. The solution consists TReX Recorder
  - Multi channel audio recorder
  - Markers
  - Web interface



- TReX Transcription
  - Multi channel audio player
  - Markers
  - Installation & configuration




- TReX Player (freeware TReX session player)
  - 1 channel audio player
  - Markers
  - No installation & configuration needed



Advantages:

- Uses standard Microsoft Windows XP or Vista PC
- Easy installation
- Easy to manage data files
  -> audio files: MP3, WAV
  -> session data files: XML
- Linking with other systems

Multi channel audio recordings:

- Supports MS Direct Sound drivers.
- Supports ASIO drivers.
- The number of channels is only limited by the PC's performance.

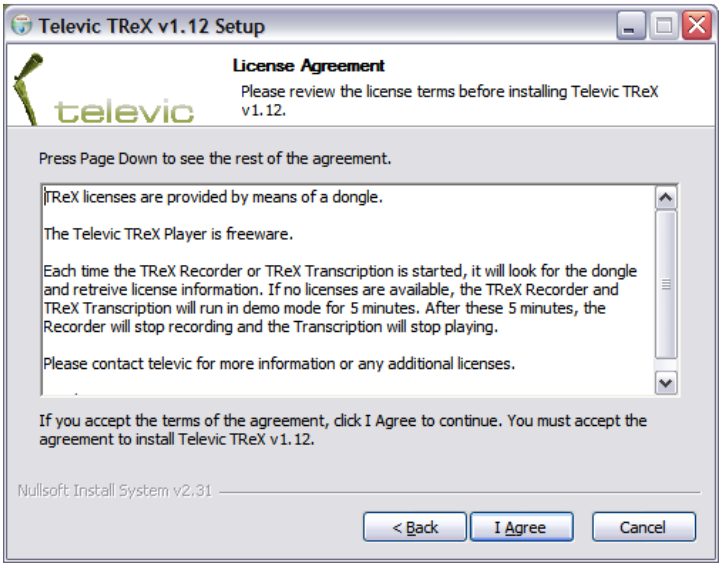
# Section 2 – Installation

## 2. How to install

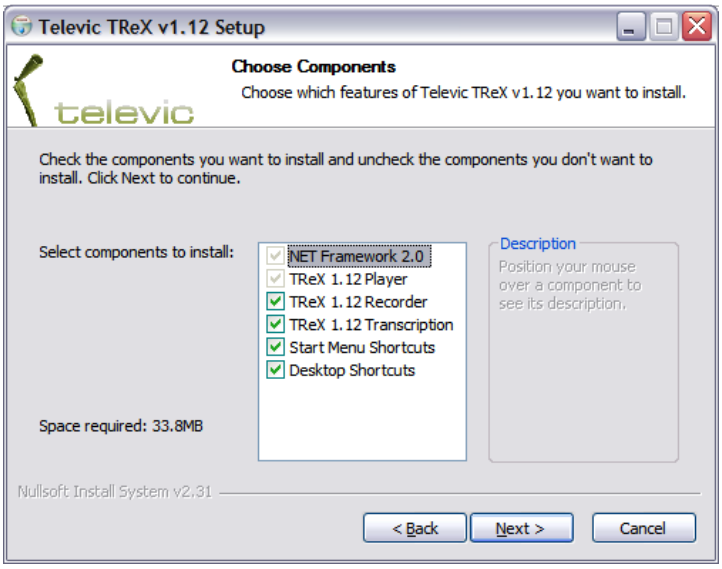
Run the installer ***trex-vX.YY-setup.exe***.
where X = major version number
and Y = minor version number

Follow the on the screen instructions.

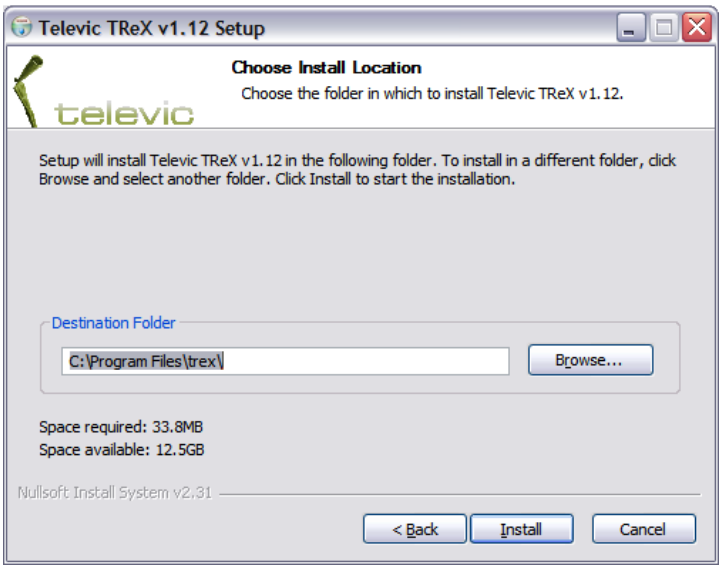

Accept the License Agreement.



Select the components that have to be installed.




Choose the install location.




The installer will also install the proper drivers for the dongle (USB license key).
Please follow the on screen instructions.


The installation has completed.

# 3. TReX Licenses

## 3.1. Introduction

TReX licenses are setup according to the following functional decomposition:

| Commercial article number | Discription |
|---|---|
| 71.98.1004 | Trex 2 channel audio recording, including USB audio interface |
| 71.98.1006 | Trex multichannel (8) audio recording, audio interface not included. |
| 71.98.1002 | Trex transcription module, including USB foot pedal |

List of tested and supported audio interfaces for the 2 and multi channel recorder:

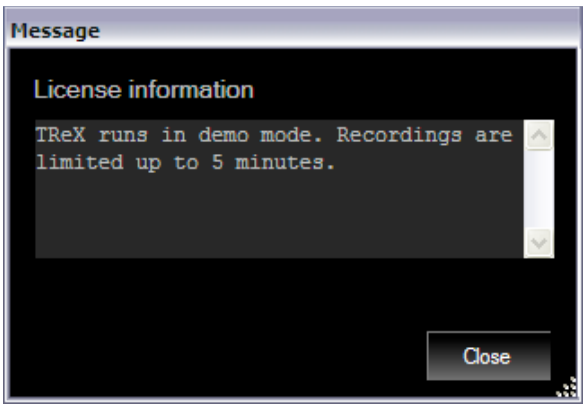
| Channels | Interface | Breakout |
|---|---|---|
| 20 | RME Hammerfall HDSP9652 | 3 * Behringer ULTRAGAIN PRO-8 DIGITAL ADA8000 |
| 8 | FireWire | M-Audio FireWire 1814 |
| 2 | USB | M-Audio Fast Track PRO |
| 2 | USB | Hercules Muse Pocket LT 5.1 |

Without licenses, TReX Recorder and TReX Transcription will run full functional in demo mode for 5 minutes.

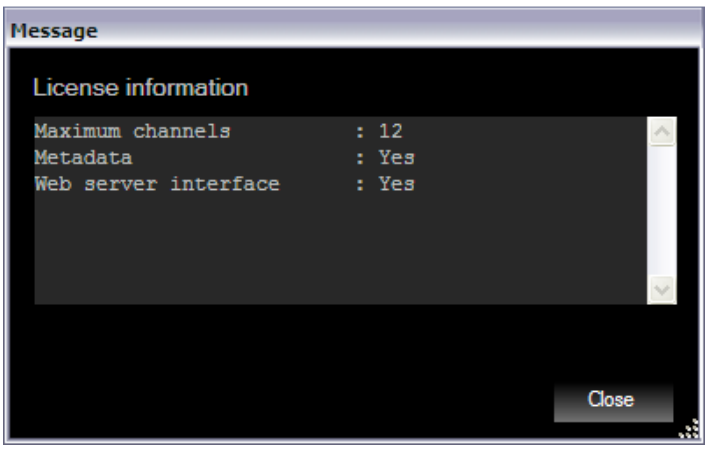
- ***TRex recorder***
  PC audio recording - 2 channels (incl USB audio card), no markers
- Additional license per ***2 extra channels***
- Additional license for ***marker support***
  Module to link with and receive markers from Televic's conference systems TCS5500, Confidea CU and Confidea WCAP+
- ***Remote supervision***
  Web interface for remote control (5 persons).
- Additional license for ***TReX Transcription***
- ***TReX Player*** is freeware.

## 3.2. License validation

TReX uses a dongle (USB key) to identify the licenses. If this dongle isn't plugged in, TReX Recorder and TReX Transcription will fire a warning at application startup.

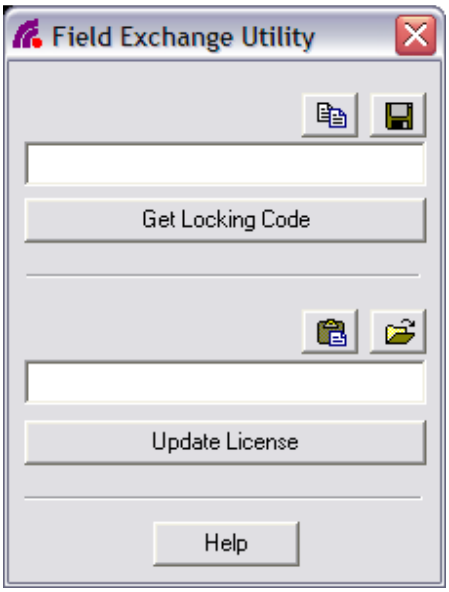



If a dongle is detected, the license information can be get from the TReX Recorder & Transcription help menu.




## 3.3. License upgrade

License upgrading is possible with the ***License Key Field Exchange Utility***.




Get the locking code by clicking the "Get locking code" button and send this code to Televic. Televic will provide you with a code that has to be put in the textbox above the "Update License" button. Click the "Update License" button to upgrade your licenses.

# Section 3 – Applications

## 4. TReX Recorder

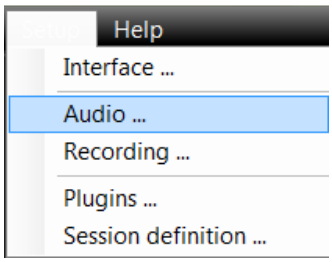
### 4.1. Introduction

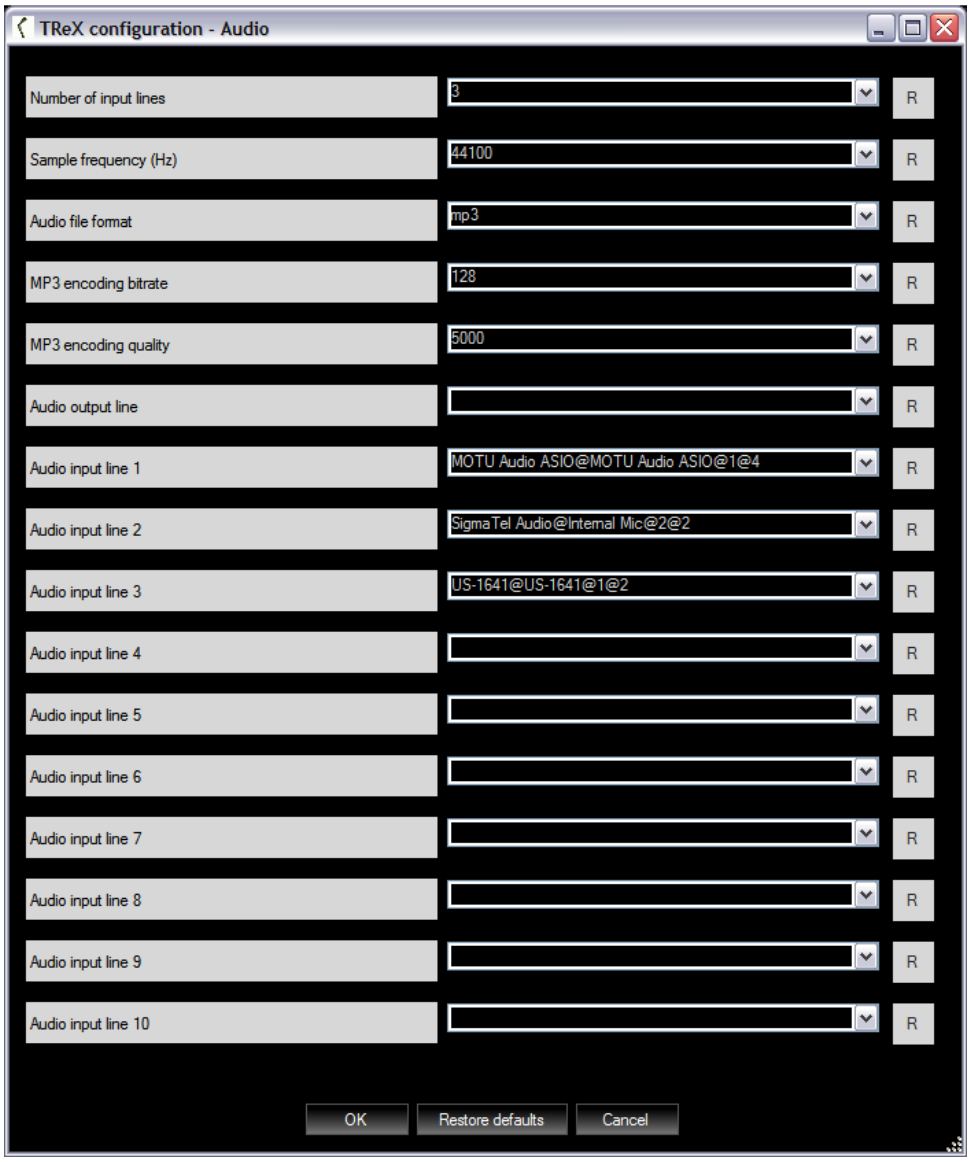

The ***TReX recorder*** provides a multi channel audio and marker recording application.
Main features of the TReX recorder:

- Easy installation & configuration.
- Multi channel audio recording.
- Auto marker recording through communication with Televic TCS5500 and Confidea CU conference systems.
- VOX controlled (Voice Operated eXchange).
- Input sensitivity, limiter/compressor, level indication per channel.
- Channel monitoring.
- Manual marker adding.
- Marker editing.
- Session customization.
- Session export (file copy or FTP upload).
- Multi recording sessions.
- Web interface: remote control.

## 4.2. Setup


### 4.2.1. Audio






In the audio configuration window, audio settings can be configured:

- ***Number of input lines***
  The number of input lines that will be used by the recorder.
- ***Sample frequency***
  By default, the sample frequency is set to 16000, which is OK for speech.
- ***Audio format***
  The format of the audio files to be recorded.
- ***Audio output line***
  This is the audio output on which monitoring will be available. In the recorder, one can select the input channel that has to be monitored. This monitoring channel be routed to the audio output line.
- ***MP3 encoding bitrate and quality***

- ***Audio input line 1 -> 10***
  TReX Recorder lists up all of the available input lines. By selecting none (selection is empty), TReX Recorder will use the default input line.

**Audio input line formatting**

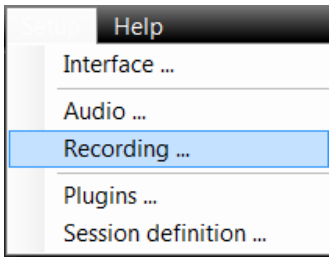
Audio input lines are formatted in a specific way, so the recorder knows how to find and initialize it.

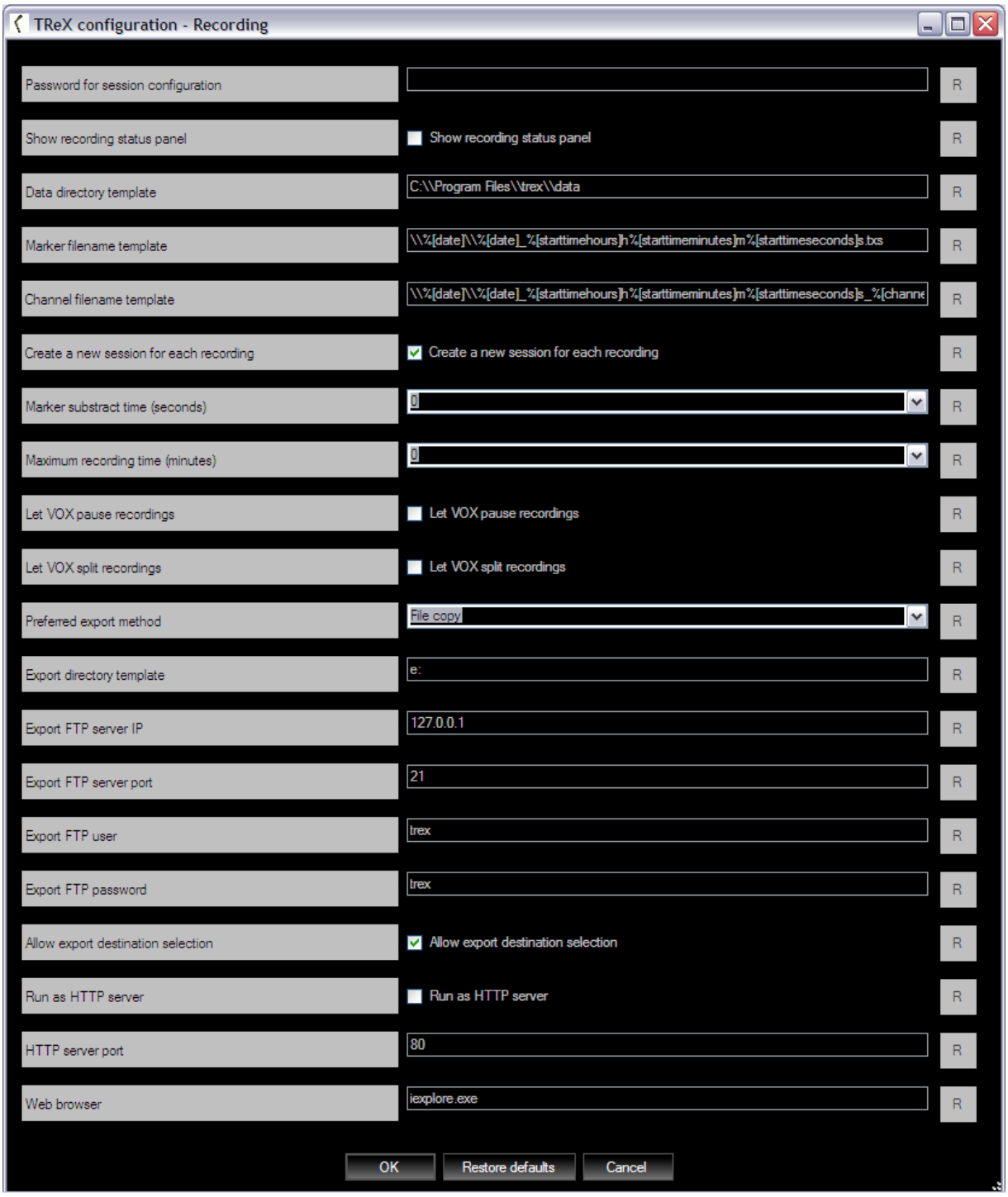
Example: "SigmaTel Audio@Internal Mic@2@2"

An audio input line formatting consists of 4 parts, separated by the character '@':
1 The audio device name ("SigmaTel Audio" in the example)
2 The audio line name ("Internal Mic" in the example)
3 The audio interface type (1 for an ASIO device, 2 for a DirectSound device)
4 The number of channels provided by the audio device

This formatting is created automatically by the recorder, so you don't need to create it manually. However, if you would like to reduce the number of channels, you do so by setting the last number in the formatting to the desired number of channels.

### 4.2.2. Recording

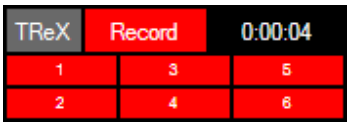





In this window, the following recording parameters can be set:

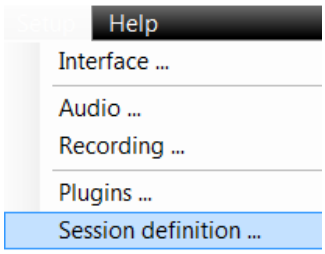
- ***Password for session configuration***
  This password is intended to protect users from unintentionally corrupting a session configuration, rather than restrict users from changing the configuration. The password cannot be reset from within the TReX Recorder interface. It is saved into a configuration file, and can only be reset by deleting it from this

configuration file. If you want to restrict users from deleting this password (and thus from changing the configuration), make sure the file is made un-accessible for that type of user account. When left empty, no password is used.

- ***Show recording status panel***
  Swich ON/OFF the displaying of the recording status panel
  
  
- ***Data directory template***
  The root directory in which the data files will be saved.
- ***Marker filename template***
  Template for the session file names.
- ***Channel filename template***
  Template for the audio file names. Do not specify an extension. The extension is added automatically, and depends on the selected audio format.
- ***Create a new session for each recording***
  If selected, TReX Recorder will create a new session whenever recording is started.
  If not selected, TReX Recorder will create a new recording within the current session.
- ***Marker substract time***
  TReX Recorder will substract this amount of time from a manually added marker's timestamp. This to avoid that markers are set after an event occurred.
  *For instance*: if an operator would like to mark the event of a person who starts speaking, the person already has started speaking before the operator was able to put the marker. If afterwards, one would like to listen to the person by jumping to the marker, the first part would be missing.
- ***Maximum recording time***
  When set to a value different from 0, all recordings will be stopped automatically when the recording time equals this amount of minutes. Set to 0 if recording may not be stopped automatically.
- ***Let VOX pause recordings***
  When ***Let VOX pause recordings*** is enabled, the VOX on **channel 1** will pause the recording whenever the signal level on channel 1 drops below the ***VOX level threshold*** for the period of time ***VOX pause time threshold***. It will restart recording whenever it detects a signal again.
- ***Let VOX split recordings***
  When enabled, the VOX on **channel 1** will split the recording whenever the signal level on channel 1 drops below the ***VOX level threshold*** for the period of time ***VOX pause time threshold*** + ***VOX split time threshold***.
- ***Preferred export method***
  Default method that will be used to export data files.
- ***Export directory template***
  Default directory that will be used to copy the data files to.
- ***Export FTP server IP address, port, user and password***
  The settings of the FTP server. When exporting data files over FTP, TReX Recorder will use these settings to connect to the given FTP server.
- ***Allow export destination selection***
  When enabled, the user can change the default export destination (directory or FTP server) right before starting the export.

- ***Run as HTTP server & HTTP server port***
  When configured, TReX Recorder can be controlled remotely from a webbrowser.
- ***Webbrowser***
  The default webbrowser that will be opened when clicking the "Open in webbrowser" menu item.

### 4.2.3. Session definition




The following parameters of a session can be configured:

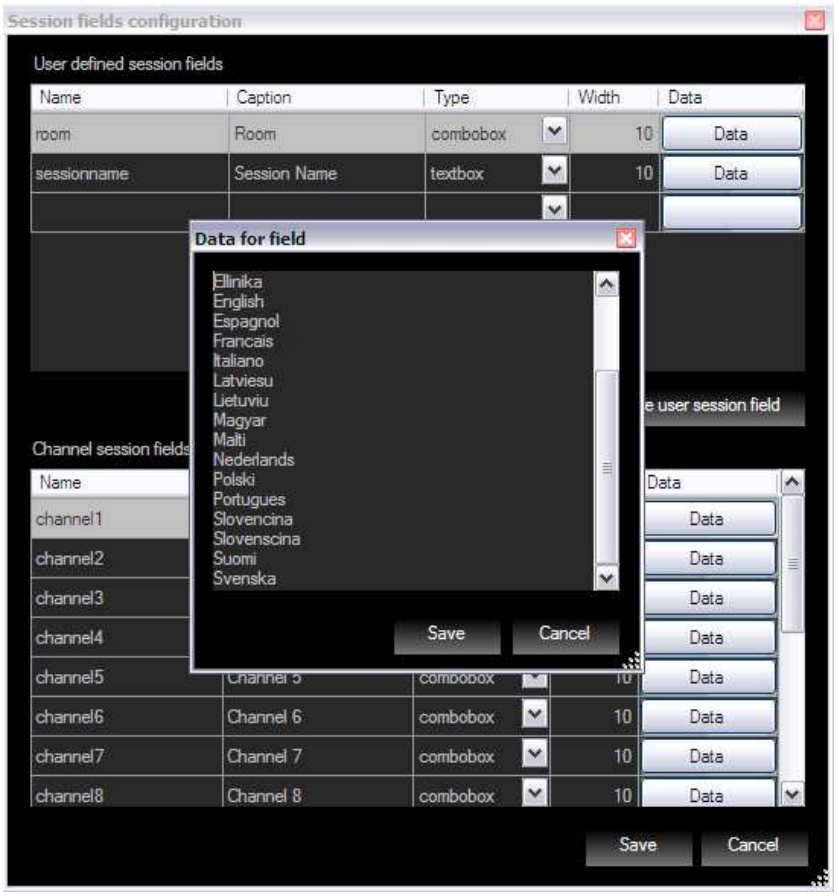
- Channels to be recorded
- User fields

For each and every session, the settings can be changed, for instance when the number of channels changes, or when the recording is done in another room, …

### 4.2.4. Session configuration customization

A session's configuration can be customized:

- **User friendly channel names**
  Give meaningful names to the channels, for instance channel 1 is "English", channel 2 is "French".
- **User defined fields**
  Add fields to a session so as to add valuable information to the sessions. You could for instance add the user field "room". This user field then can be filled in according to the room the recording was done in.
- **File names formatting**
  The audio and session files are stored in a directory structure. Both the directories and file names can be formatted. So it is possible to arrange them by date, channel, time, …

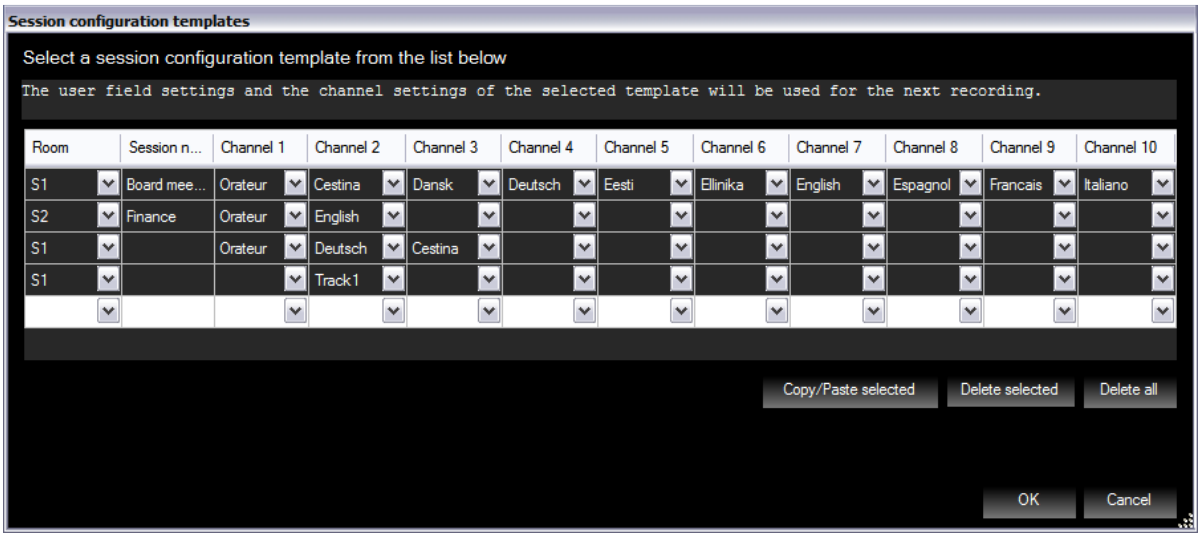



In this window, the following session configuration parameters can be set:

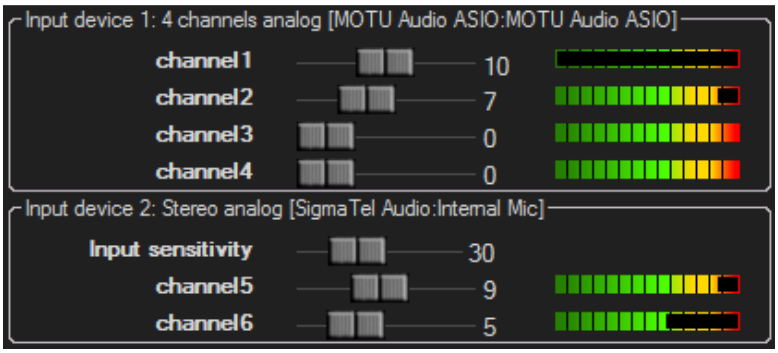
- ***User defined session fields***
  User defined session fields are used to add valuable information to a session. A user field is a type of information that can be set for each and every session. For instance, the room in which the recording was done, the operator who has done the recording, the name of the session, …
  The type of the user fields indicates how the user field can be set by the user who is configuring the session. If the type of a user field is a textbox, the user will be able to fill in the textbox with any information. If the type of the user field is a combobox, the user will be presented with a drop down box, from which he can select one of the entries. If the type of the user friendly field is a checkbox, the user will be presented with a checkbox.
- ***Channel configuration***
  For each and every channel, a number of user friendly names can be listed up. The user who is configuring the session will be presented with this list, so he can select one of the user friendly names.

### 4.2.1. Session templates

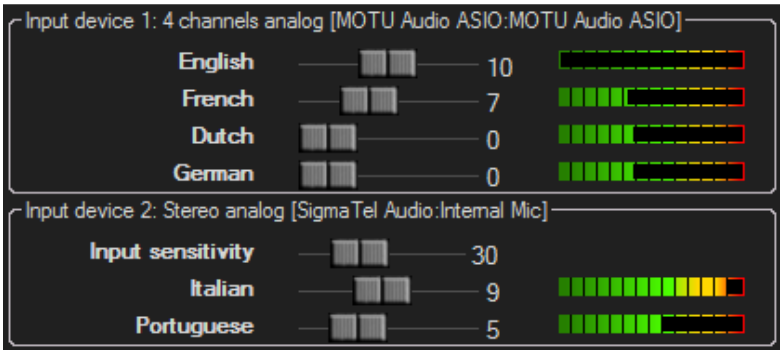
In order to avoid having to change a session's parameters each and every time, ***session templates*** can be used. A session template is a preset of a session configuration. Once you've set up a list with session templates, new sessions can be automatically configured using these templates.




Example of channels without user friendly names:




Example of channels with the use of user friendly names:



## 4.3. Software plugins

The TReX recorder comes with a number of software plugins, which make it possible to capture events (microphone ON/OFF, badge IN/OUT, agenda items, ..) from Televic's conference systems TCS5500 and Confidea CU. Communication with these systems can be configured from within the TReX interface. On top of that, TReX Recorder can be fine-tuned to meet a customer's specific project needs. For instance, TReX recorder can be configured to start recording whenever a certain microphone was switched ON.

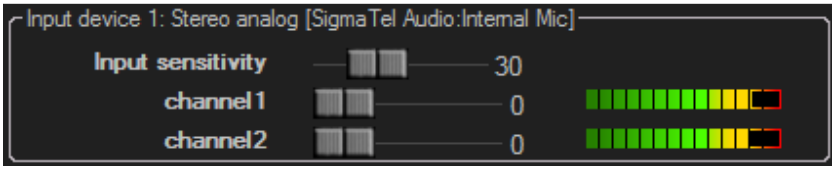
## 4.4. Recording control

### 4.4.1. Start / pause / stop

A recording can be started, paused or stopped manually.

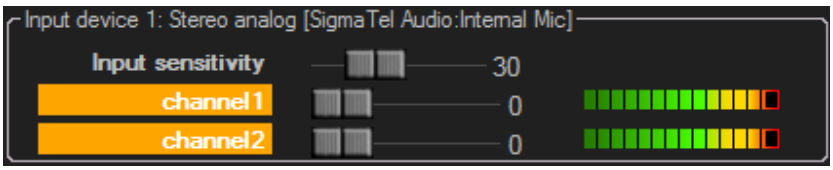
The colors of the channels indicate the recording state of the channels.

When no recording is ongoing, the channels have no color.

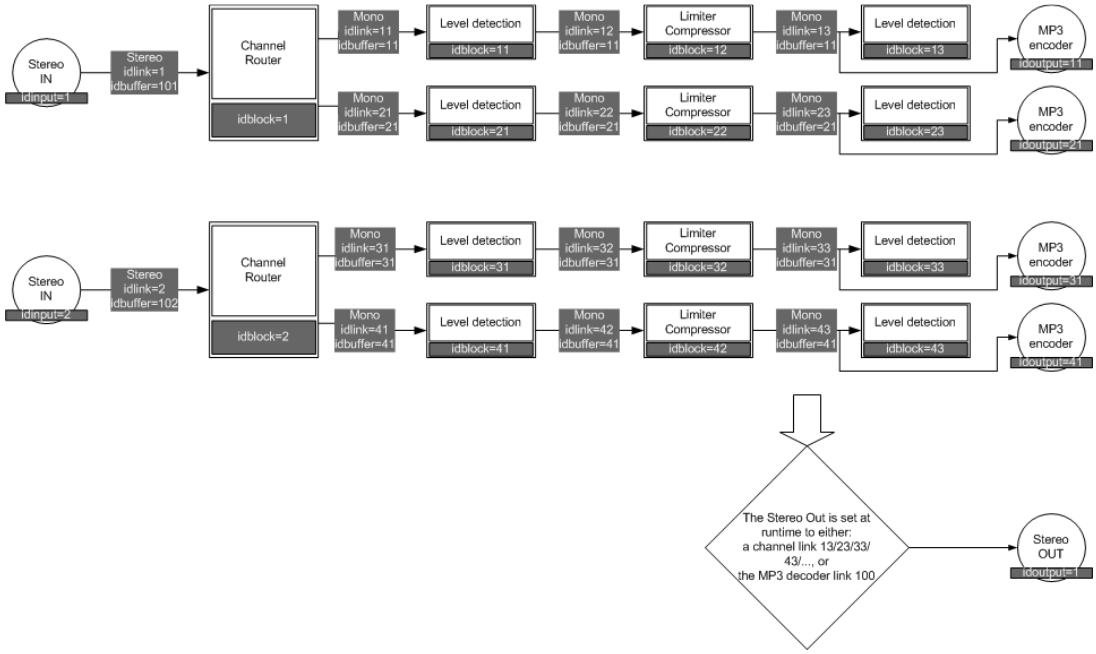



When a recording is started, the channels which are recorded are colored red.


When a recording is paused, the channels which are paused are colored orange.

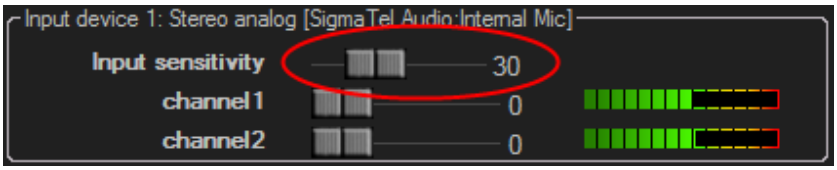


### 4.4.2. Inputs devices, channels, analog output

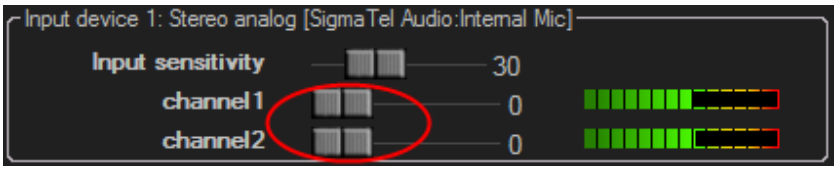



The TReX recorder uses ***input devices***, known by the PC.

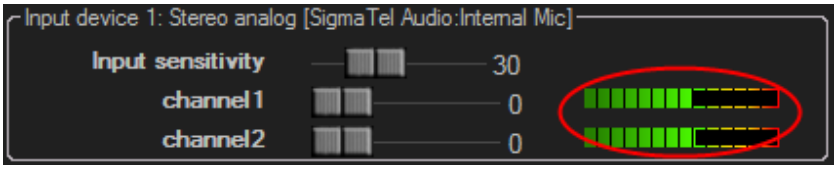
- All input device's ***channels*** are listed up. For DirectSound devices, the sensitivity of the input can be set.




- Each channel goes through a limiter/compressor. The setting can be changed with the slider bars. When set to 0, no limiting/compressing is applied. This is the default value. It is advised not to change this setting unless the input signal level is very low.




- Each channel goes through a level detection block. These levels are indicated in the interface.



The TReX recorder uses an ***analog output*** of the PC. Each channel can be routed to this monitoring. The volume setting of this output can be changed:


# 4.5. VOX

## 4.5.1. Introduction

The TReX recorder supports VOX controlled recording. VOX stands for ***Voice Operated eXchange***. The VOX in the TReX recorder detects whether there's an audio signal on a channel or not. The recorder can be configured to let the VOX pause/restart and even to split an ongoing recording. This comes in very handy when you want to filter out silences (no audio signal), and as such avoid irrelevant recordings, and eventually reduce the size of the eventual recordings.

**Pause / restart recording by the VOX**
The VOX can only pause/restart an ongoing recording. If there's no recording ongoing, the VOX will not start recording automatically.

## 4.5.2. VOX parameters

The VOX can be parameterized as following:


- ***VOX level***
  The VOX will report "audio signal" on the channel if the audio signal on the channel is above this value. If the audio level on the channel drops below this level, the VOX will report "no audio signal" on the channel.
- ***VOX timeout (in seconds)***
  If the VOX detects no signal for as long as this period of time, the recording will be paused (if the VOX is configured to control pause/restart recording). Only the VOX on channel 1 will pause/restart the recording on all of the channels.
- ***VOX split timeout (in minutes)***
  If the VOX detects no signal for as long as this period of time on channel 1, the recording will be split.

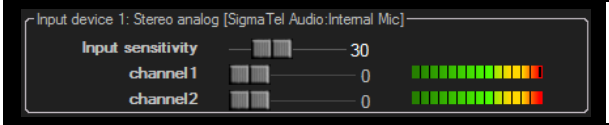
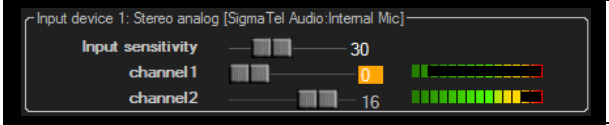
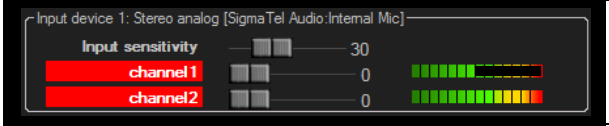
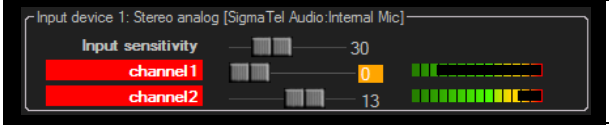
**Enable / disable the VOX**
If the VOX level is set to 0, the VOX is disabled. For each and every other value, the VOX is enabled.

### 4.5.3. Colors in the interface

For each and every channel, the VOX indicates -by means of a color on the channel's level value of the channel- whether there is an audio signal detected on the channel or not. If the VOX is disabled, there's no color indication.

- No color on the channel's level value: VOX is disabled or a signal was detected on this channel
- Channel's level value is orange: no audio signal was detected on this channel

The following table with a number of examples shows how colors are used in the interface.

| Interface | Is recording | Audio detected | | VOX pauzes recording |
|---|---|---|---|---|
| | | Cnl 1 | Cnl 2 | |
|  | No | Yes | Yes | No (isn't recording) |
|  | No | No | Yes | No (isn't recording) |
|  | Yes | Yes | Yes | No, because signal was detected on channel 1 |
|  | Yes | No | Yes | No, because VOX is not allowed to pause |
|  | Yes | No | Yes | Yes, because VOX is allowed to pause and no signal was detected on channel 1. |

# 4.6. Configuration

The TReX Recorder can be configured according to a customer's needs.

## 4.6.1. Interface


In this window, the following interface parameters can be set:

- ***Password for general configuration***
  This password is intended to protect users from unintentionally corrupting a configuration, rather than restrict users from changing the configuration. The password cannot be reset from within the TReX Recorder interface. It is saved into a configuration file, and can only be reset by deleting it from this configuration file. If you want to restrict users from deleting this password (and thus from changing the configuration), make sure the file is made un-accessible for that type of user account. When left empty, no password is used.
- ***The colors of the interface*** can be adapted to your personal preferences.

# 5. Markers

## 5.1. Introduction

A marker is an event that occurs at a certain point in time during a meeting and that is kept track of. A marker has a type, name, timestamp, …

Typical examples of markers are

- A microphone which is switched ON/OFF
- An agenda which is opened/closed
- Voting which is started/stopped
- Recording has started
- …

Markers are tracked events that are of interest for anyone who is listening to the recordings afterwards. Markers are very useful when searching for a particular part in a recording. If markers are automatically set by Televic's conference systems TCS5500 and Confidea CU and delegate databases are used, markers show who is talking at what point in time during the conference.


Marker types:

- ***Manual marker***
  Markers, manually entered by operator.
- ***TReX marker***
  TReX creates markers when recording is started, stopped or paused.
- ***Auto marker***
  Events reported by other systems, typical conference systems.
- ***Web marker***
  TReX recorder can run a built-in HTTP server. Markers can be set over the HTTP protocol.
- ***TCCP marker***
  Events notified over the TCCP interface (TCCP = Televic Common Communication Protocol).

Markers have two different timestamps:

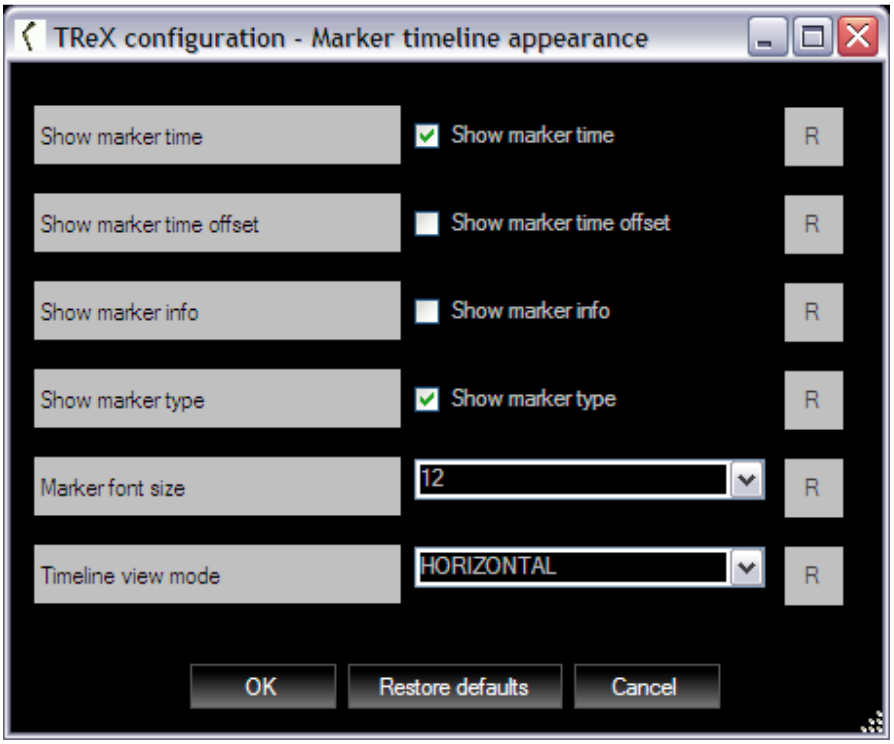
- ***Actual time***
  This is the current time when the marker was set.
- ***Offset time***
  This is the time offset referring to the beginning of the recording.

## 5.2. Visualisation

### 5.2.1. Marker timeline

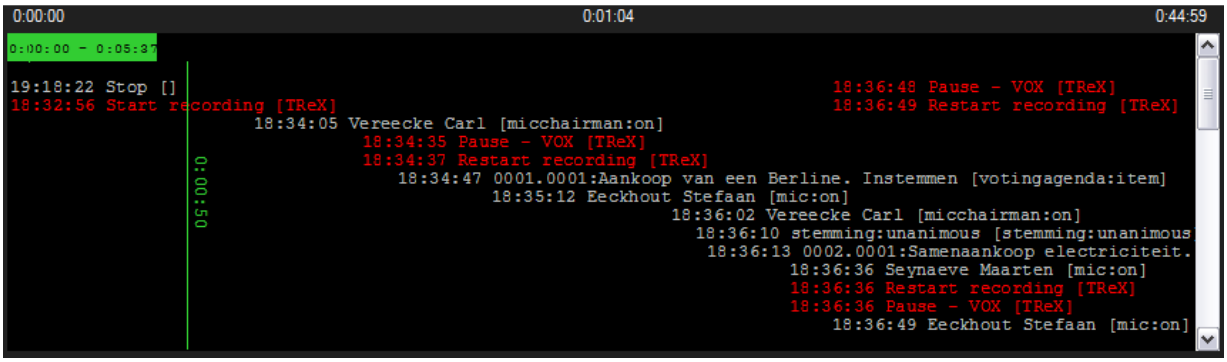
In the TReX Recorder and TReX Transcription, markers are lined out on a timeline.

The appearance of the markers on this timeline can be configured.



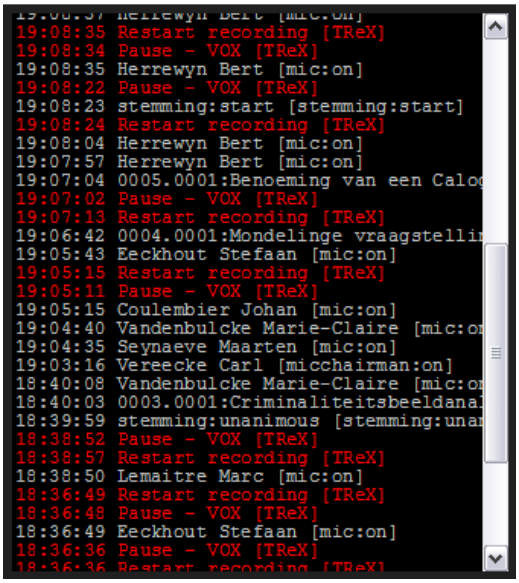

The visualization of the markers can be either horizontally or vertically.

In the horizontal visualization, the markers are setout on a timeline.



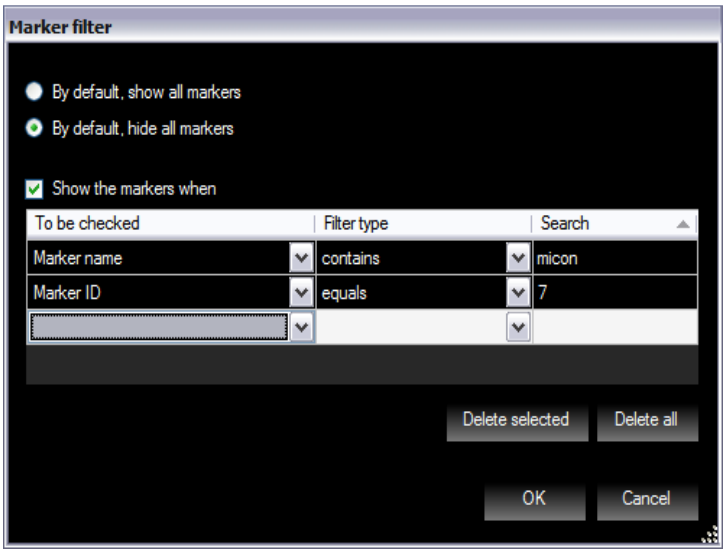

The zoom factor of the timeline can be set with the following buttons:

In the vertical visualization, markers are be listed up vertically, either "last on top", or "last on bottom".




### 5.2.2. Filtering

The appearance of markers can be filtered. By filtering, one can specify which markers to show in the interface. Filtering can be done by marker type, marker ID, …

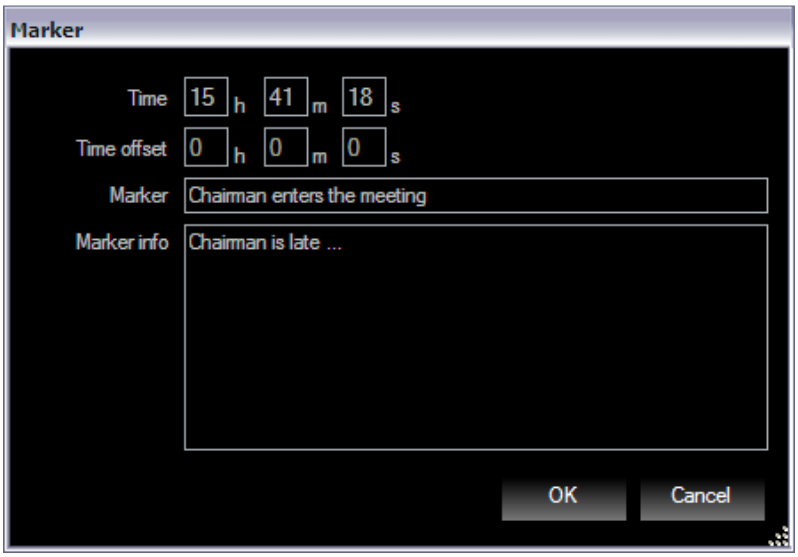



# 5.3. Manual markers

In the TReX Recorder and TReX Transcription applications, markers can be added or edited manually.

## 5.3.1. Add a marker

To add a marker, go to the marker menu item, and click the ***Add*** menu item. The marker window is shown, in which the marker parameters can be set.

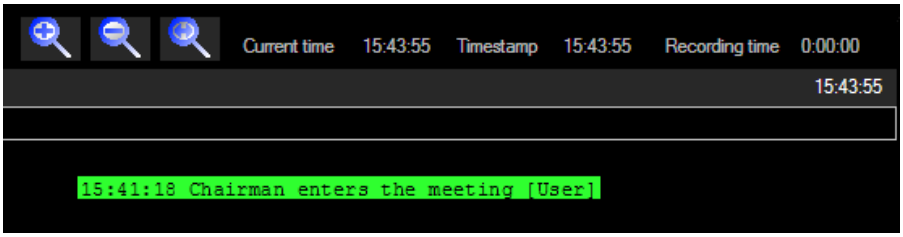



Click OK to add the marker.

**Shortcut key**
Hitting the [space] button also brings up the marker window.

### 5.3.2. Move a marker

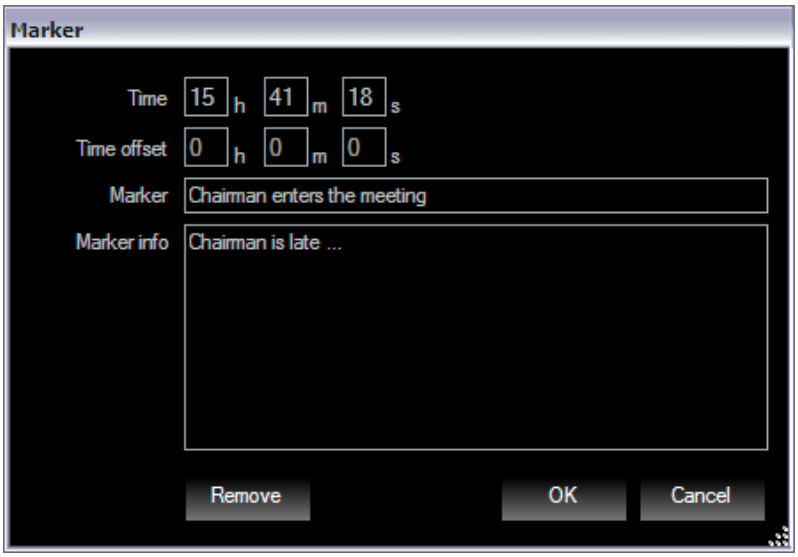
Hoover the mouse pointer over the marker. The marker text will be inversed.




While the text is inversed, hold down the right mouse button and drag the marker to another position.

### 5.3.3. Edit/remove a marker

Hoover the mouse pointer over the marker. The marker text will be inversed. Double-click the left mouse button to open the marker window.

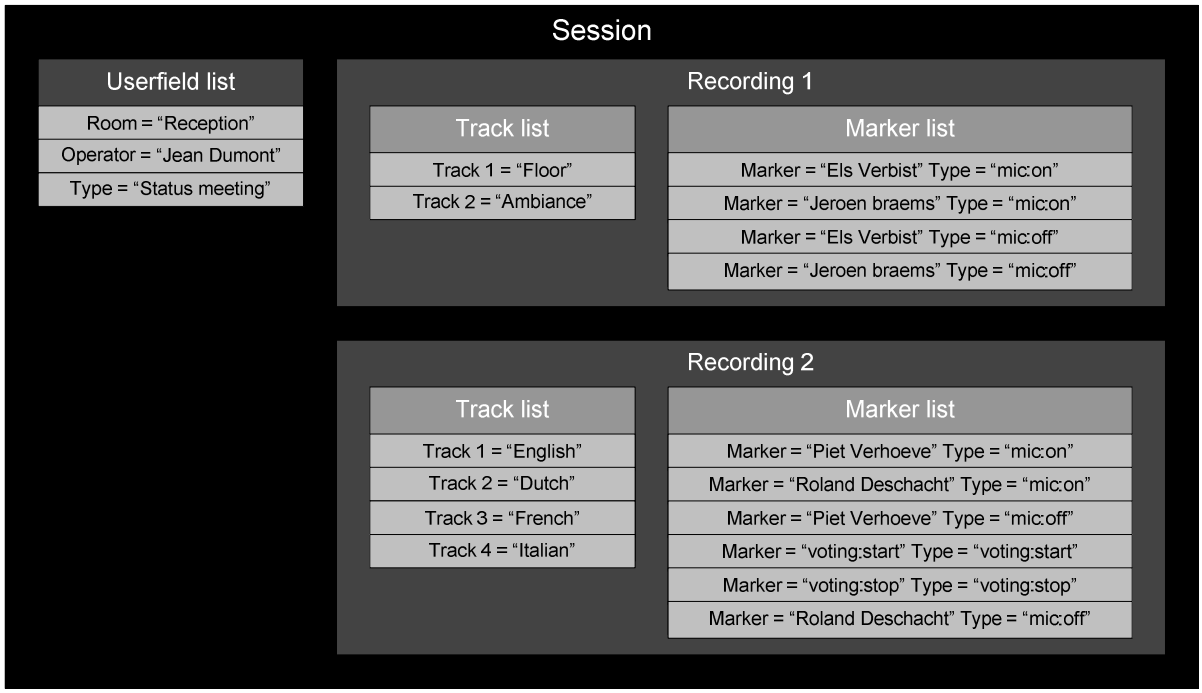



- Change the marker parameters and click the OK button, or
- Click the Remove button to remove the marker.

# 6. Sessions

## 6.1. Introduction

TReX uses standard audio file formats (mp3 or wav) to store the ***audio data***. Next to this audio data, all additional data belonging to this audio data is stored in a ***session*** file.

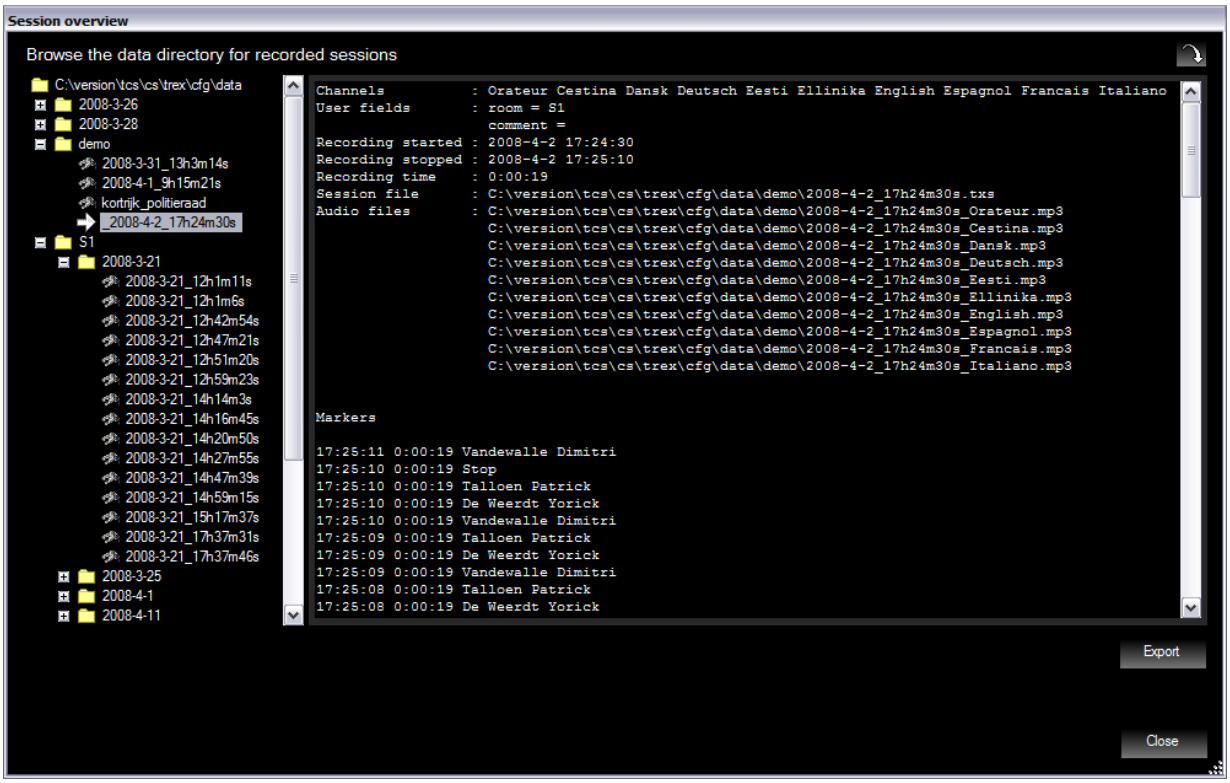



Rules within a session:

- A single session can contain ***user fields***. User fields are used to store relevant session information (for instance the name of the room in which the recording was done, or the name of the person who has made the recording).
- A single session can contain a list of ***recordings***.
- A single recording can contain a list of audio ***tracks*** (one per channel).
- A single recording can contain a list of ***markers***.

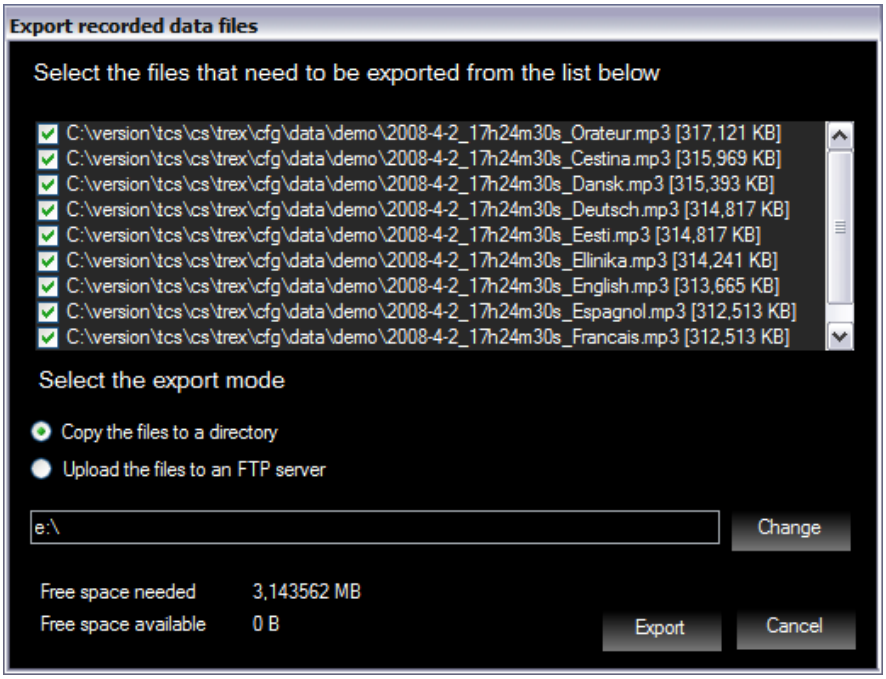
## 6.2. Session overview

In the TReX Recorder and TReX Transcription, one can get an overview of all sessions.




## 6.3. Export

Sessions can be exported, either by a file copy or an FTP upload to an FTP server.



## 6.4. Session file format

Sessions are stored in XML formatted files. This way, session can very easily imported in other applications, for instance been transformed in web pages.

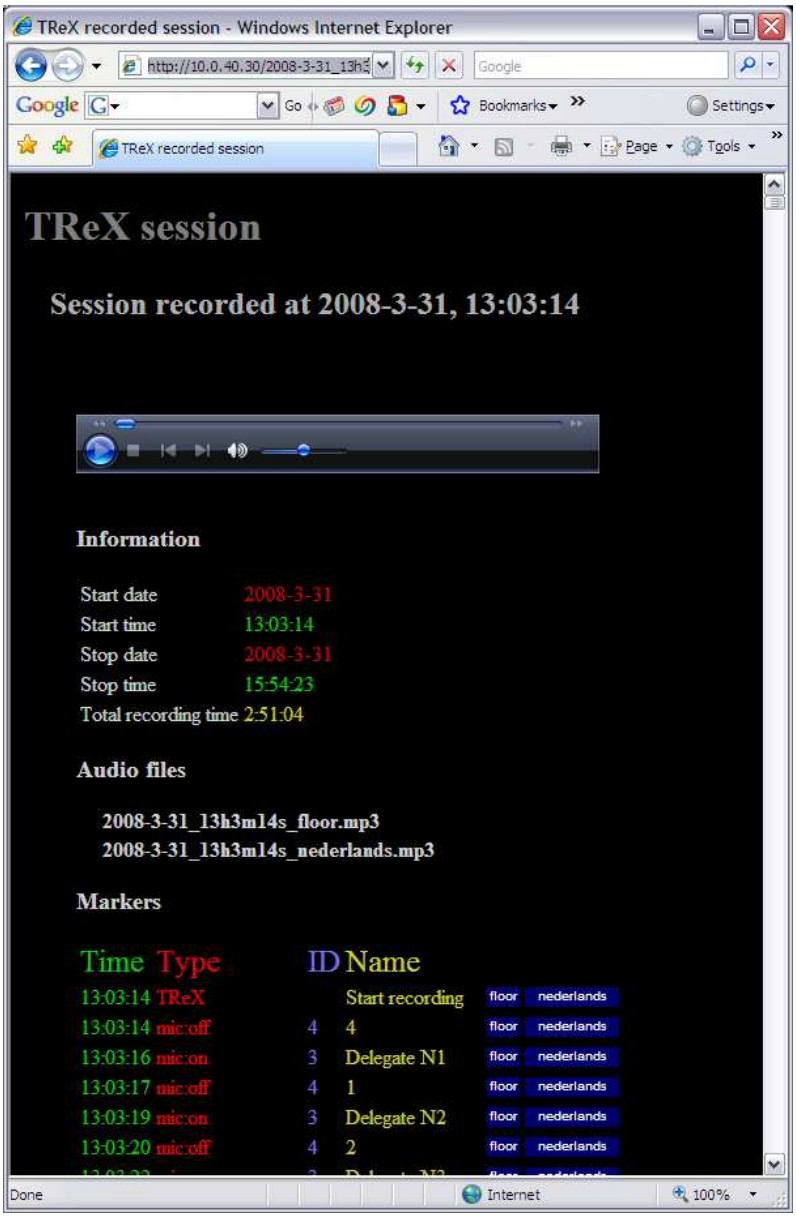
*Example of a tracklist:*

```
<tracklist>
  <track name="floor">
    <medialist>
      <media timeoffset="0:0:0">2008-4-1_9h15m21s_floor.mp3</media>
    </medialist>
  </track>
  <track name="nederlands">
    <medialist>
      <media timeoffset="0:0:0">2008-4-1_9h15m21s_nederlands.mp3</media>
    </medialist>
  </track>
</tracklist>
```

*Example of a markerlist:*

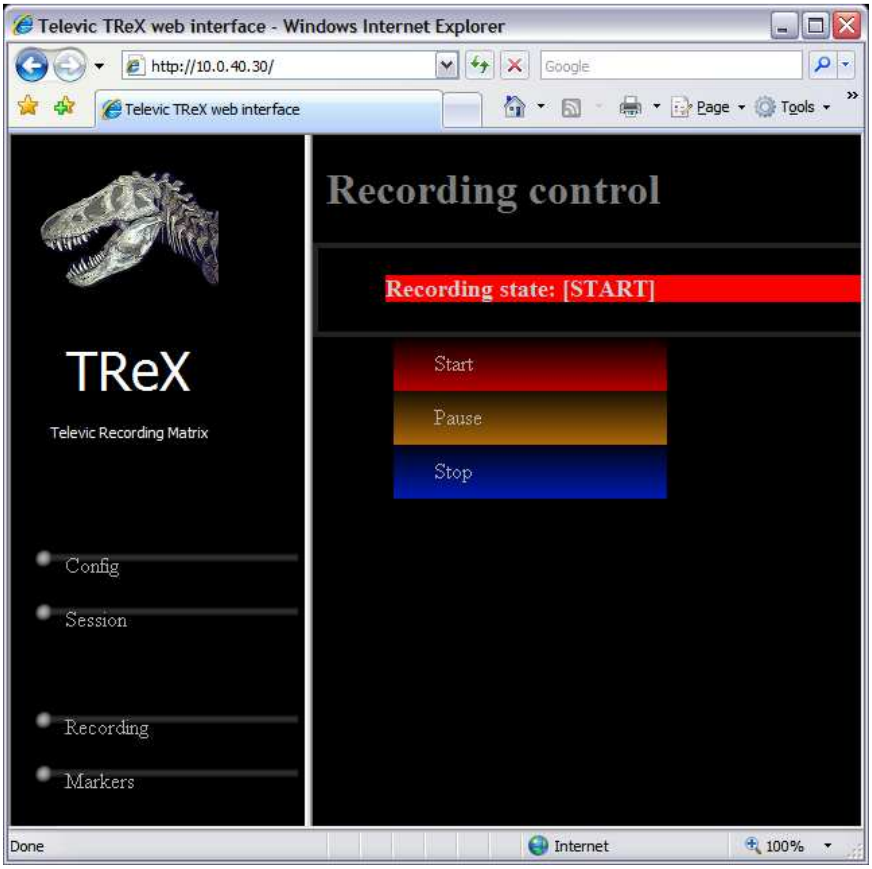
```
<markerlist name="Session recording">
  <marker name="Start recording" time="9:15:21" timeoffset="0:00:00" type="TReX" />
  <marker name="Delegate N4 " time="9:15:22" timeoffset="0:00:00" type="mic:on" id="3">
    <info>Mic has been switched ON. Microphone number = 4. Delegate name = Delegate N4 </info>
  </marker>
  <marker name="4" time="9:15:22" timeoffset="0:00:01" type="mic:off" id="4">
    <info>Mic has been switched OFF. Microphone number = 4</info>
  </marker>
  <marker name="Delegate N1 " time="9:15:23" timeoffset="0:00:01" type="mic:on" id="3">
    <info>Mic has been switched ON. Microphone number = 1. Delegate name = Delegate N1 </info>
  </marker>
</markerlist>
```

Example of a session file, transformed into a webpage:

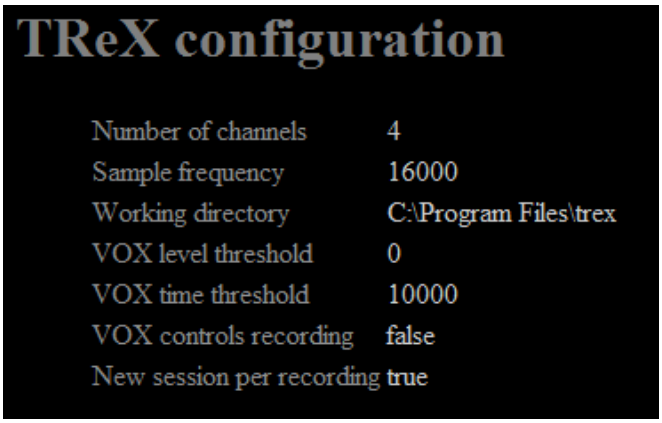

TReX recorded session - Windows Internet Explorer
TReX recorded session
TReX session
Session recorded at 2008-3-31, 13:03:14
Information
Start date 2008-3-31
Start time 13:03:14
Stop date 2008-3-31
Stop time 15:54:23
Total recording time 2:51:04
Audio files
2008-3-31_13h3m14s_floor.mp3
2008-3-31_13h3m14s_nederlands.mp3
Markers
Time Type ID Name
13:03:14 TReX Start recording floor nederlands
13:03:14 mic:off 4 4 floor nederlands
13:03:16 mic:on 3 Delegate N1 floor nederlands
13:03:17 mic:off 4 1 floor nederlands
13:03:19 mic:on 3 Delegate N2 floor nederlands
13:03:20 mic:off 4 2 floor nederlands
Done
Internet
100%

## 6.5. Remote supervision

TReX Recorder can run as a HTTP server. This way, the recorder can be controlled from any webbrowser and does not need any commercial license.The web-pages are delivered within the TReX package and can be changed by a customer to meet his specific needs. This is a very powerful way to let a customer integrate TReX Recorder functionality in his own web-based application.




### 6.5.1. Configuration information



### 6.5.2. Session information

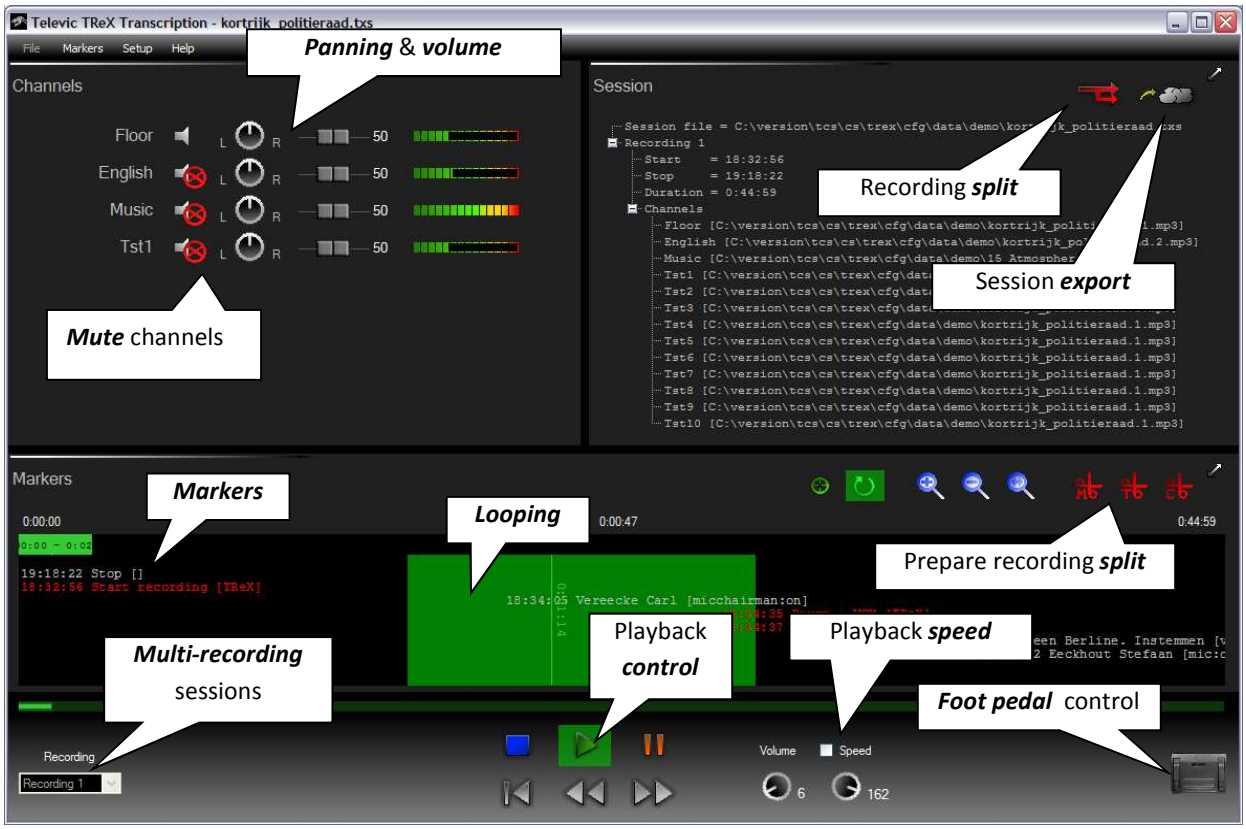

### 6.5.3. Markers


### 6.5.4. Recording control

# 7. TReX Transcription

## 7.1. Introduction

The ***TReX transcription*** provides a multi channel audio playback application.
Main features of the TReX transcription:

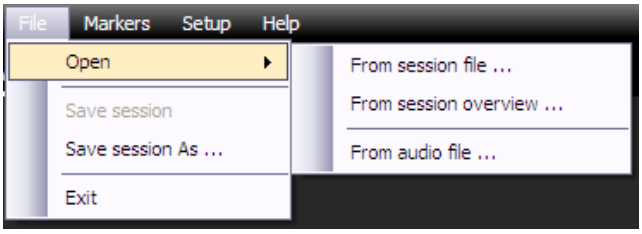



- Easy installation & configuration.
- Multi channel audio player
- Start, pause, stop playback.
- Channels can be panned to the left or right output.
  For instance, the floor channel can be panned to the left, English can be mixed to the panned.
- Fast forward, jump backwards, looping
- Playback speed.
- Jump to markers.
- Manual marker adding & editing.
- Foot pedal control & shortcut keys.
- Add, remove, move, edit markers
- Create multi-recording sessions
- Create a new session from an audio file.

## 7.2. Sessions

Sessions can be opened in different ways:

- By opening the ***session file***.
- By opening the session from the ***session overview***.
  The session overview will present the sessions which were recorder previously with the TReX Recorder. The overview thus will only contain sessions if the TReX recorder is installed on the same PC as the TReX Transcription.
- By opening an ***audio file***.
  A new session file is automatically created. A single recording is added to the session with a single track (the audio file).




## 7.3. Playback control

TReX transcription playback can be controlled by

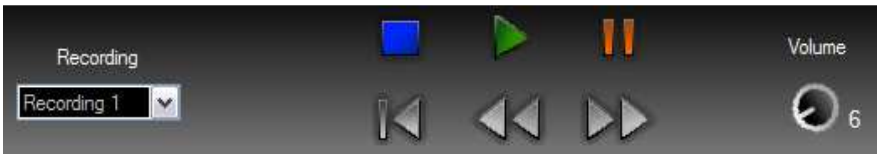
- User interface
- Shortcut keys
- Foot pedal

Once a session is loaded in the TReX Transcription, the recordings are listed up. Select the recording out of the list. Playback now can be started/paused/stopped.

The following can be controlled by shortcut keys and foot pedals:

- Volume up/down
- Start/pause/stop playback
- Speed up/slow down playback
- Rewind/jump backwards/fast forward

### 7.3.1. User interface



Also, the playback speed can be changed. In order to do so, check the Playback speed option, and set the desired playback speed.

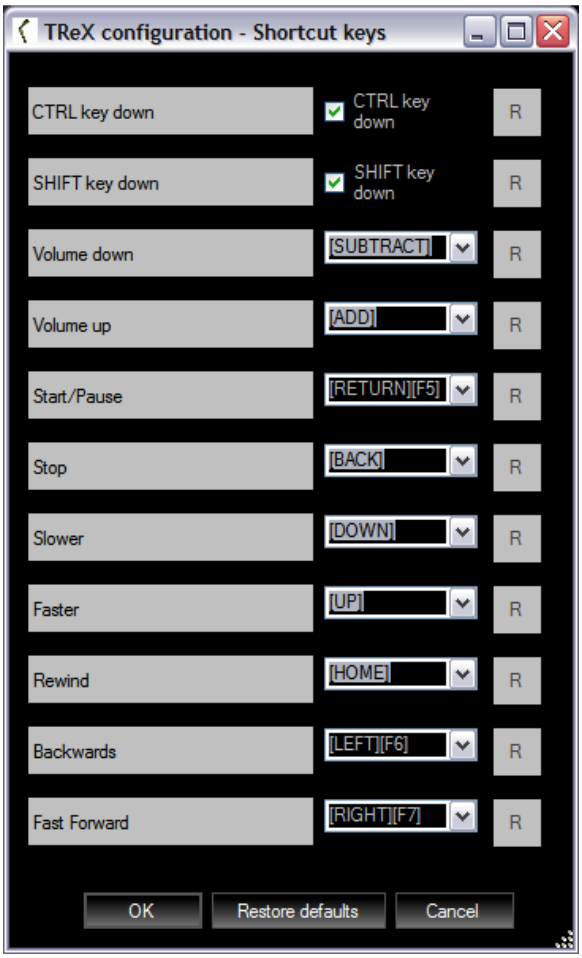

**Playback speed and panning**
When playback speed is changed, all channels are mixed both to the left and right outputs, so panning will have no effect.

### 7.3.2. Shortcuts keys

A shortcut is *a combination of keys being hit*. Shortcut keys come in very useful when a transcriber is using another program to do the actual transcription (typing down what is being said). By using shortcut keys, the transcriber doesn't need to switch over to the TReX Transcription user interface, to start/stop/pause/… playback the recordings. TReX Transcription can run on the background, behind the application that the transcriber is using. Whenever a shortcut is hit, TReX Transcription will notify this, even when it is running in the background.

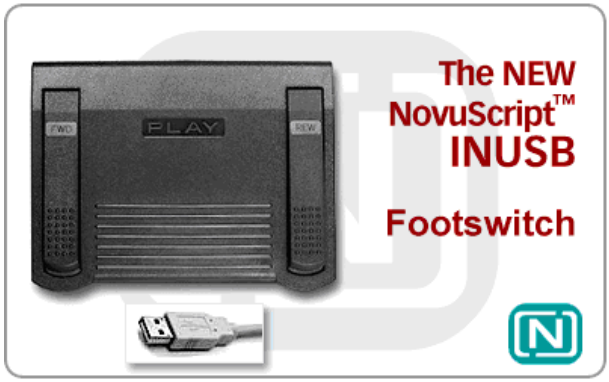
By default, the CTRL and SHIFT keys need to be held down in combination with another key. This can be switched off, but it is advised to use the CTRL & SHIFT combination, otherwise the shortcuts might interfere with the application on the foreground.

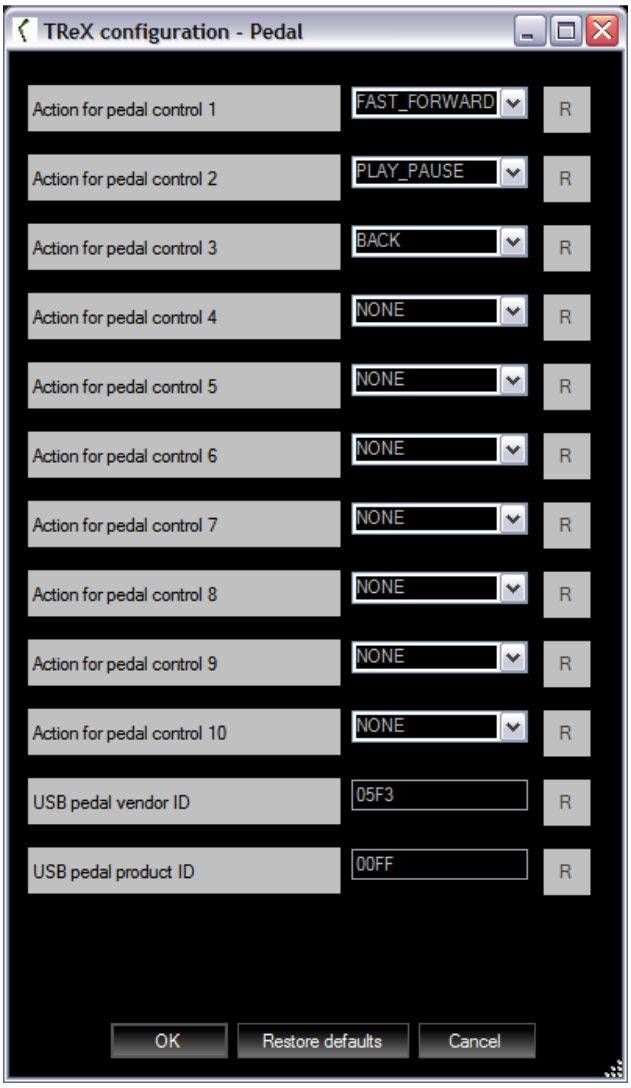
It's possible to assign more than one shortcut keystroke to a certain action. This makes is possible to control the same functionality by different keys.




### 7.3.3. Foot pedal

TReX Transcription supports USB HID (Human Interface Devices) foot pedals. The pedal is connected to the USB port. Each and every pedal control can be configured to activate an action. The pedal has to be identified by the pedal's HID vendor ID and product ID. Other foot pedals are not supported.






## 7.4. Marker timeline

Next to the standard functionality (editing/moving/removing markers), the timeline also supports additional functionality within the TReX Transcription.

### 7.4.1. Playback offset

The playback offset is show by a line with the corresponding time offset.

### 7.4.2. Mode

The timeline can be set in 2 modes.

- **Offset mode**

While in offset mode, clicking on the timeline will make playback jump to the selected time offset.

- **Looping mode**

While in looping mode, clicking on the timeline will set the looping boundaries.
Clicking the left mouse button sets the left boundary, clicking the right mouse button sets the right boundary.

### 7.4.3. Timeline behaviour

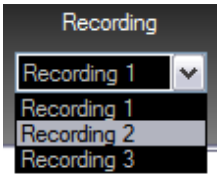
Depending on the mode the timeline is in, the timeline will respond differently to mouse events. The following table gives an overview on the behavior of the timeline.

| Mode | | Click position | | Button | | Event | | | | Action |
|---|---|---|---|---|---|---|---|---|---|---|
| Offset | Looping | Marker | Timeline | Left | Right | Mousedown | Mouseup | Click | Double click | |
| X | X | X | | X | | | | X | | Set offset to the selected marker |
| X | X | X | | X | | | | | X | Edit marker |
| X | X | X | | | X | X | X | | | Drag&drop marker |
| X | | | X | X | | | | X | | Set offset to selected position on timeline |
| X | | | X | X | | | | | X | New marker at the selected position |
| | X | | X | X | X | X | X | | | Set selection |

## 7.5. Split recordings

A session can contain 1 or more recordings. With the TReX Transcription, it is possible to split those recordings into smaller recordings. This comes in useful, for instance, when the audio files become too big.

First, select the recording to be split.

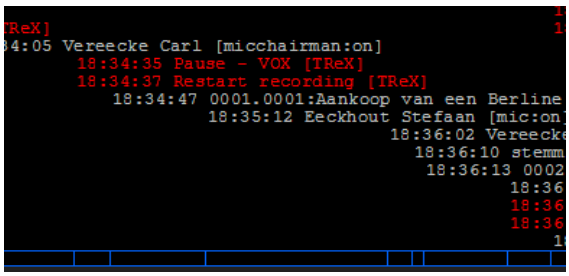


Next, the split needs to be prepared. This means that one has to decide how to split up the recording. The timeline will indicate the split preparation (same color as the split state: blue when idle, red while splitting), by splitting up the timeline in time slices. Preparing the split can be done in 3 different ways.

- Split by ***markers***

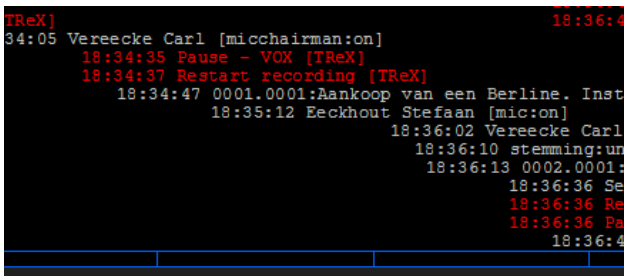
  In this mode, each and every marker will cause a split.

- Split by ***time interval***

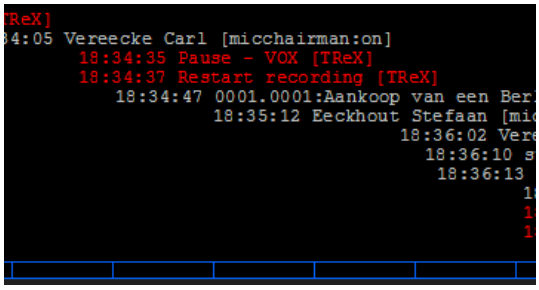
  In this mode, the total recording time is split up into a number of equally timed slices.

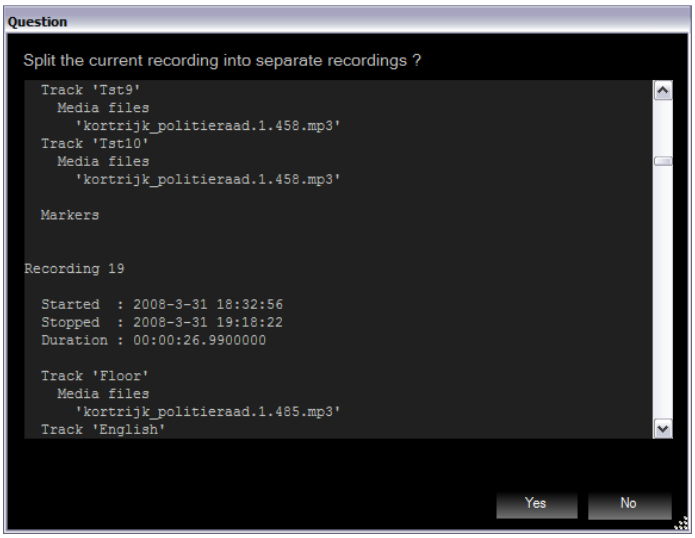
- Split by ***count***

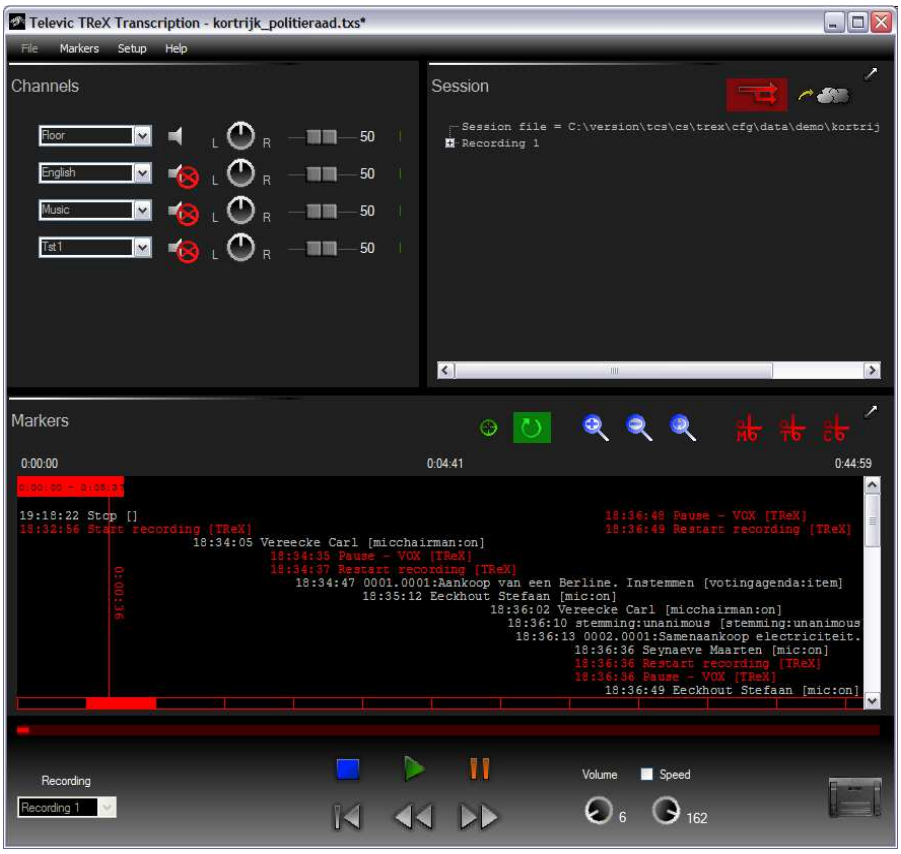
  In this mode, the total recording time is split in a given number of time slices.

Once the split has been prepared, it can be executed by clicking the split button. 
Next, TReX Transcription shows how the split recording will look like afterwards, and asks for confirmation.

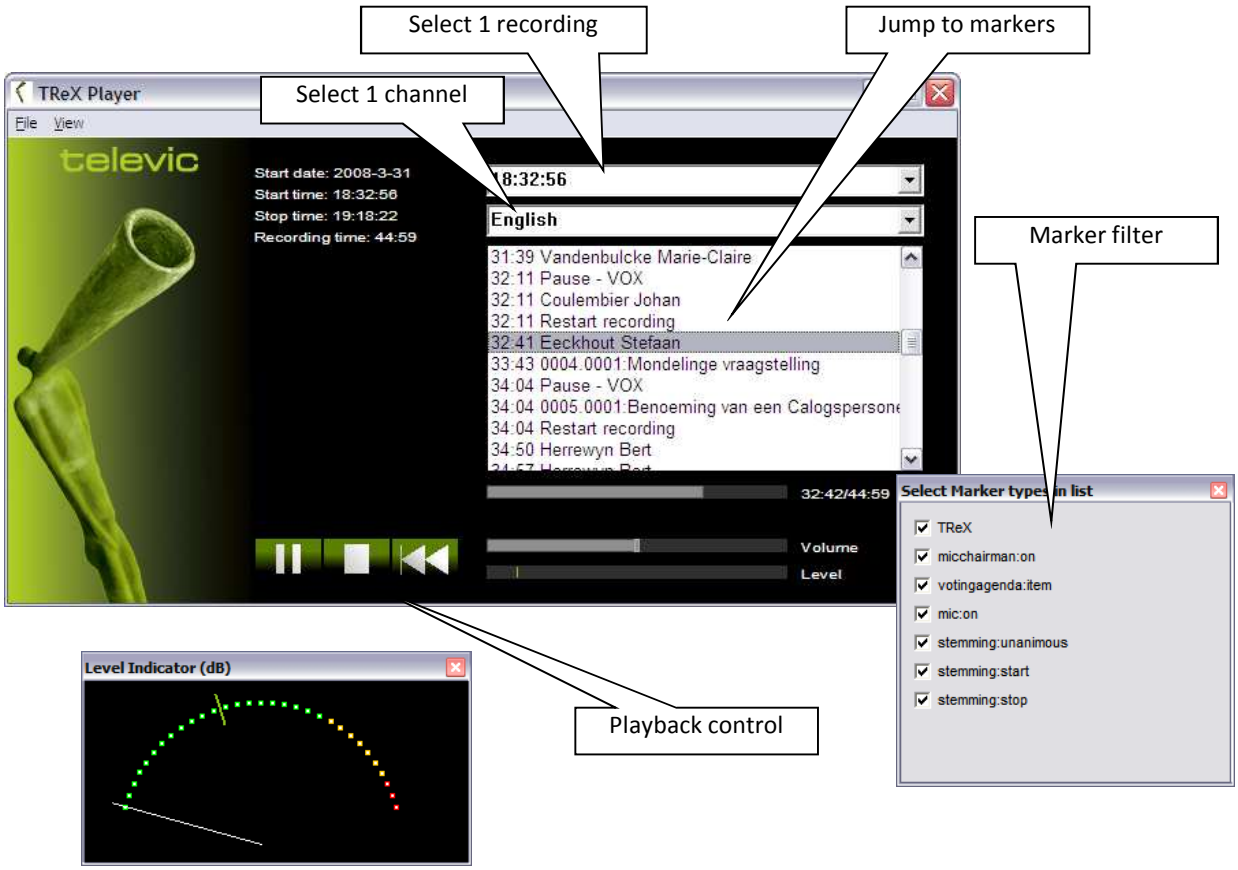



After confirmation, TReX Transcription starts splitting the recording.




When splitting has finished, the newly created session can be saved in a new session file, and the newly created session is opened.

# 8. TReX Player




1 channel audio player

The ***TReX player*** provides a single channel audio playback application.
Main features of the TReX player:

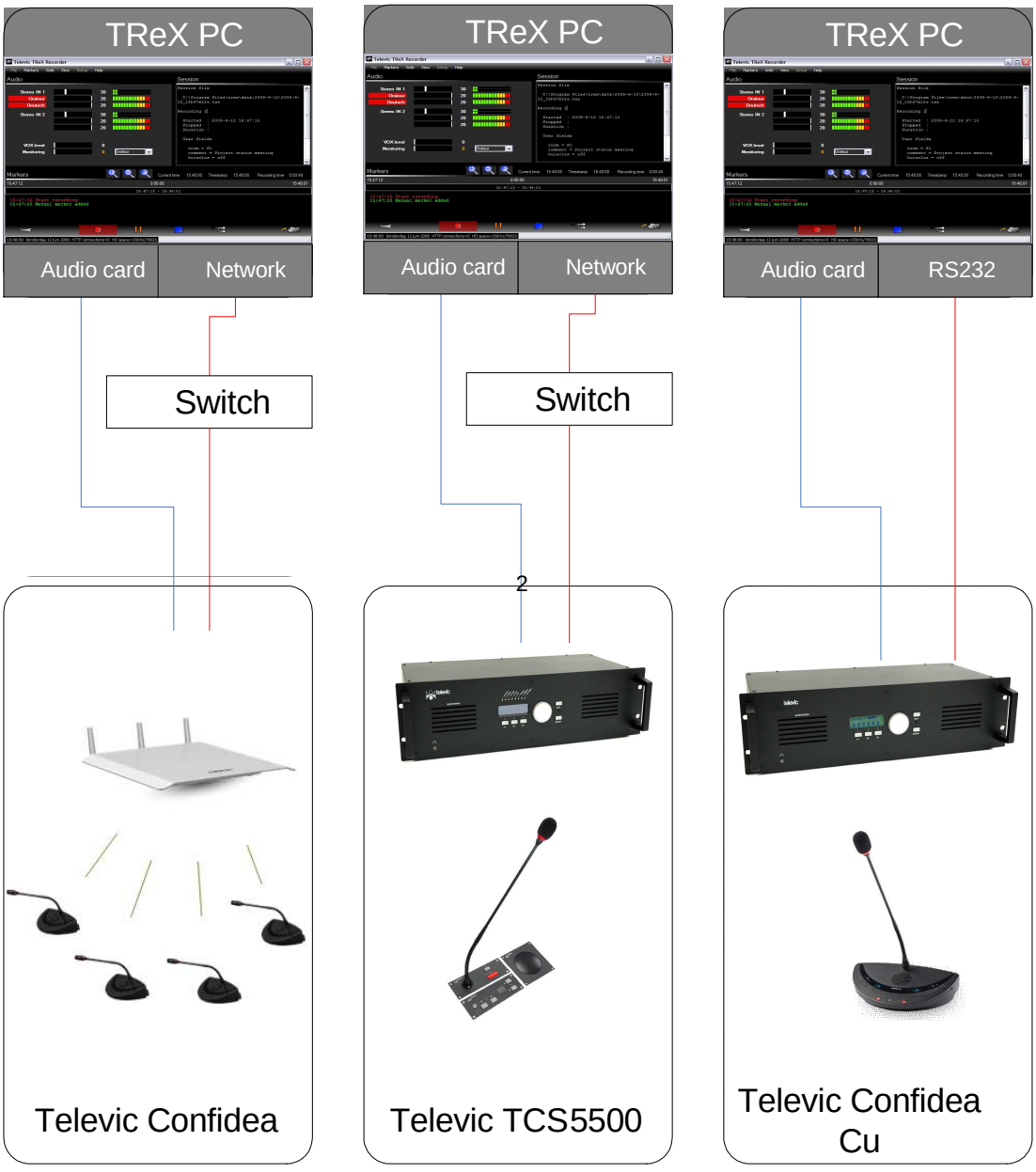
- No installation & configuration needed.
- Single channel audio player.
- Jump to markers.
- Jump in time.

# Section 4 – Use cases

## 9. Televic Conference Systems

The TReX Recorder can connect to and receive markers from the following Televic Conference Systems:

- Televic Confidea wireless
- Televic TCS5500
- Televic Confidea Cu



## 9.1. Step 1 – Hardware configuration

Two types of hardware connections need to be made in order to link both systems:

- Analogue audio connection (to record the audio)
- Communication connection (for auto markers)

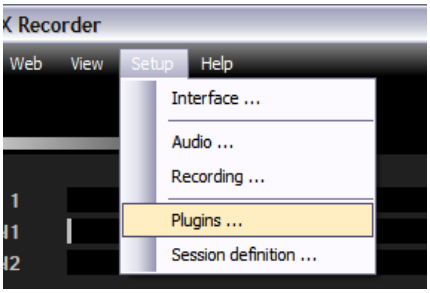
Establish the analogue audio connection by connecting the analogue audio outputs from the Televic Conference System's central unit to the sound card input(s) of the TReX PC. If more then 2 channels have to be recorded, a multichannel soundcard is required on the PC.

For details on how to route the audio signal out of the Televic Conference System's central unit, please refer to manual of the Conference System.

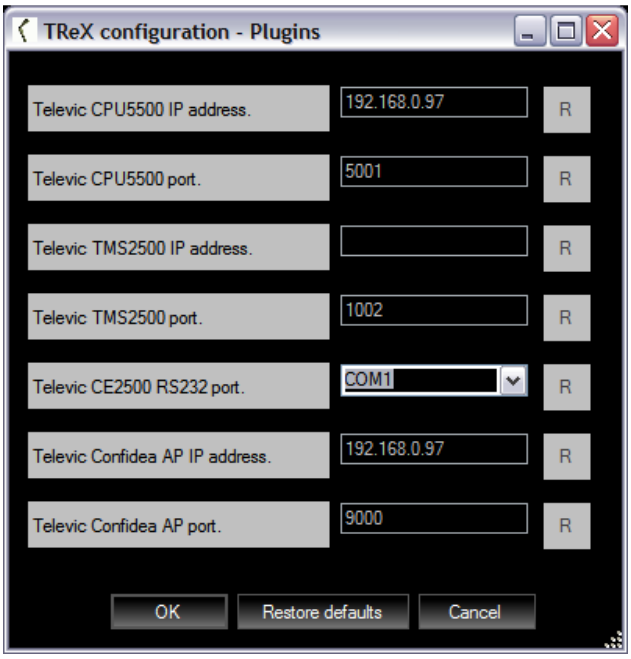
Establish the communication connection by connecting the TReX PC with the Conference System over TCP/IP or RS232.

## 9.2. Step 2 – TReX plugin configuration

In order to let the TReX connect to the Conference System, the plugins need to be configured.




The plugin settings are conference system specific.




The following table gives an overview of all of the markers which are supported per Conference System:

| Conference system | TCS5500 | Confidea Wired | | Confidea wireless |
|---|---|---|---|---|
| TReX connects to | CPU5500 | Software suite | Confidea CU | Access Point |
| Connection over | TCP/IP | TCP/IP | Serial (RS232) | TCP/IP |
| Protocol | API | Camera 8 | Control panel | TCCP |
| Mic on | YES | YES | YES | YES |
| Mic off | YES | YES | YES | YES |
| Delegate name | YES | YES | - | - |
| Badge in | - | - | - | - |
| Badge out | - | - | - | - |
| Voting agenda open | YES | YES | - | - |
| Voting agenda item | YES | YES | - | - |
| Voting start | YES | YES | - | - |
| Voting stop | YES | YES | - | - |
| Voting unanimous | - | YES | - | - |
| Voting agenda closed | YES | YES | - | - |

# 9.3. Step 3 – Conference System configuration

## 9.3.1. Confidea wireless

TREX Recorder communicates directly with the Access Point, no specific configuration is needed.

## 9.3.2. TCS5500

TREX Recorder communicates directly with the CPU5500, no specific configuration is needed.

### 9.3.3. Confidea wired

Communication with Confidea CU is supported in two ways:

- RS232: direct connection between the TReX PC and the Confidea CU. Connect the configured RS232 port of the TReX PC to the ***COM2*** of the Confidea CU. Activate the ***Control Panel*** communication on the Confidea CU.

  Remark : If you have a serial port on your PC and COM2 and COM3 of the Confidea CU will be used, you must first start the application that is using the USB to serial convertor before you start the application that is using the serial port of your PC.
- TCP/IP: indirect connection, via the TMS2500 software (Televic Microphone System Software).
  The TMS2500 software needs to be configured: