

Control Software

# VENICE

## Client Software

User Guide





# VENICE Client Software User Guide

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User Guide Version 3.0 for the VENICE Client Software Version 3.0

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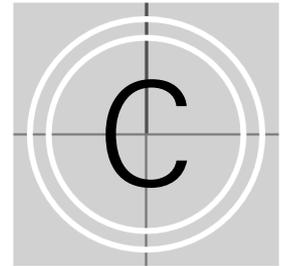
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# Introduction

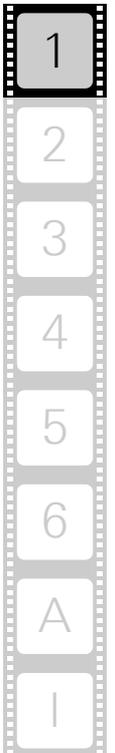


This document describes how to use the software delivered with VENICE, the Media Production Hub manufactured by Rohde & Schwarz DVS GmbH (in short 'DVS').

In today's fast-paced news production environment, broadcasters are faced with a variety of challenges such as: Optimizing workflow efficiency permanently; increasing the number of codec technologies; and providing new business models for content providers – just to name a few. With its large number of supported codecs and formats, VENICE makes you well prepared for a world of constantly changing coding technologies and resolutions. The integrated vendor-independent communication standards in VENICE such as FIMS, MOS, SOAP and many more enable seamless system interaction in your workflows. VENICE not only helps you create new business models – it also allows you to reduce costs and streamline your workflow.

To control the hardware of VENICE, the VENICE client software is required. It is a comprehensive and intuitive application that can be used either on the server locally (Linux version) or on any network client (Linux, Mac, Windows) connected to the server. With this you can place the hardware of VENICE at any location you like and still have full control over it. With one instance of the software you can control different video channels of one or more VENICE servers at the same time and even perform multi-device operations with channel groups. However, you can also run several instances of the software in parallel, for example, to have them side-by-side on the desktop.

To obtain a complete overview of e.g. all connected video channels in the network, it is recommended to use the VENICE View application software at the same time.



## 1.1 Overview

This user guide informs you about the general handling of the VENICE software as well as about its complete controllable interface.

The chapters in this user guide contain the following information:

Chapter 1	Begins with a short introduction to VENICE and its software, followed by a note regarding the audience this manual is written for and an explanation of the conventions used in this manual. Additionally, it provides important notes that you should read.
Chapter 2	This chapter contains basic information about the VENICE client software. In addition to the information how to start and exit the program, you find information about the setup and structure of VENICE and of this guide, as well as the software's key features and basic file types.
Chapter 3	This chapter gives you a detailed reference for the program interface. All its tabs, menus, options and further items of the user interface are introduced and explained.
Chapter 4	Describes all features, options and functions of the VENICE client software that are available for the user level 'User'. You find descriptions about how to record, playout and transform with VENICE. Furthermore, you find information about the record scheduler in Spycer, the Avid Workflow Option and about how to work with AS-11 files.
Chapter 5	Describes all features, options and functions of the VENICE client software that are available for the user level 'Superuser'. You find descriptions about how to preconfigure the software and the 'Configuration' menu in the main menu.
Chapter 6	Describes all features, options and functions of the VENICE client software that are available for the user level 'Administrator'. Among others, you find descriptions about how to install the software, how to make server configurations, set the IP address and how to gather log files.

Appendix	Gives additional information about the software. Among others you can find lists of the available keyboard shortcuts, the supported file formats and VDCP commands.
Index	This chapter facilitates the search for specific terms.



## 1.2 Target Group

To use this user guide and the DVS software correctly, you should have experience in handling PCs and working with the respective operating system where the software is installed. If you want to use the software and the DVS system to its full potential, you should also have knowledge in the field of digital video in general.

When working on the VENICE server system, you should be familiar with how to operate the hardware of a video/server system.

For the system administrator charged with the task to set up and administer the VENICE server and to install the VENICE client software on network clients further requirements must be applied. For this you should know how to handle computer equipment and have experience as a system and network administrator.

Additionally, this manual is intended for personnel that should be able to configure the VENICE client software. For this you should know the how to handle the VENICE client software, have experience operating with computers and working with the respective operating system where the software is installed.

Furthermore, to use the DVS system in connection with other equipment, e.g. a VTR, you should know how to operate this equipment.

## 1.3 Conventions Used in this User Guide

The following typographical conventions will be used in this documentation:

- Texts preceded by this symbol describe activities that you must perform in the order indicated.
- Texts preceded by this symbol are parts of a list.



Texts preceded by this symbol are general notes intended to facilitate work and help avoid errors.



You must pay particular attention to text that follows this symbol to avoid errors.

“ ” Texts enclosed by quotation marks are references to other manuals, guides, chapters, or sections.

‘ ’ Texts enclosed by single quotation marks are references to labelings given by the author and quoted labelings.

<b>BUTTON</b>	Text in small caps and bold indicates a push button
<b><i>Menu</i></b>	Text in italic and bold indicates either a menu name or options in a menu list
<b><i>Menu » Option</i></b>	In the specified menu select the stated item
<b>Item</b>	Text in bold only stands for other labeled items of a user interface
<i>Directory/File</i>	Directory structure or file
Entry	Parameters, selections or entries made in the program; it may also indicate a command (e.g. at a command line), a syntax or contents of a file/output
[Key]	An individual key or a key combination on a keyboard

### Keyboard Shortcuts

To perform options or procedures with the keyboard often requires a simultaneous pressing of two keys.

Example:

[Ctrl + F1]                      If this is given, hold down the [Ctrl] key and press simultaneously the [F1] key.

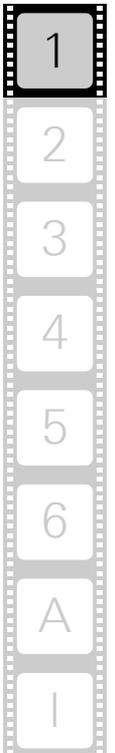
### Screenshots

The screenshots shown in this documentation were taken for the most part from the Windows-based version of the VENICE client software. Depending on the operating system where the software is installed, their appearance may differ from your environment. However, they should contain the relevant elements that you need to understand the described actions.

### Command Descriptions

Command descriptions may additionally use the following notation:

< . . . >                      Variable; this term has to be replaced by an appropriate value



## 1.4 System Requirements

When installing the VENICE client software on a client system please observe the following system requirements:

### Supported Hardware

These are the minimum hardware requirements that the computer system has to meet if you want to use the program on a client system:

- 2 GHz processor
- 2 GB RAM
- 250 MB free space on system disk
- Network card to communicate with the VENICE server (at least 100 Mbit)
- NVIDIA graphics card

### Supported Operating Systems

The program can be executed on the following operating systems:



Be sure that you have installed the latest system updates and/or service packs for your system, otherwise you may encounter software and/or hardware problems.

- Linux (Red Hat Enterprise 5 or 6)



DVS tested the software with the above mentioned Linux distributions. Others may work as well, but not necessarily.

- Mac OS X (min. 10.4)
- Windows 7 (recommended), Windows Vista or Windows XP

### Other Requirements

For any data management with the VENICE client software (e.g. the selection of paths or files in the software via the user interface) the Spycer application by DVS must be installed as well.



You can download the newest version of the Spycer application from its internet site ([www.spycer.net](http://www.spycer.net) or [www.spycer.de](http://www.spycer.de)).

Furthermore, if the VENICE client software is installed on a remote system, the Spycer application running there should be fully licensed.

## 1.5 Important Notes

To use the VENICE software correctly, please heed the following:



On the DVS system only use the designated video drive (main storage) to store video and audio data. Other storage locations will be too slow for real-time operations.



Leave about 15% of the overall main storage capacity empty of data for real-time performance reasons.



The real-time capability of the DVS system depends to a large extent on the performance of the system's hardware. Therefore, it is recommended to terminate all other programs on the DVS system while working with VENICE.



Your DVS system has been tested thoroughly and is very reliable. However, because of the vast amount of third-party software available, its reactions on the installation of such could not be tested. The installation of third-party software on the DVS system may disrupt the real-time capability and/or limit the functionality of your system.



For any data management with the VENICE client software the latest Spycer application by DVS must be installed as well (see chapter "Level Administrator" on page 6-1 for further information).



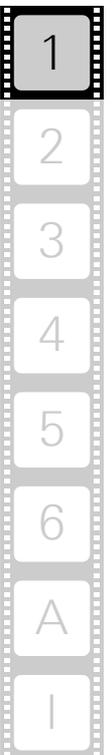
If the Spycer software is running in compatibility mode (see "Spycer" user guide), the VENICE client software will not work.



On Linux operating systems the display suspend mode will be disabled when the VENICE client software is installed and it must remain disabled.



Please note that not all software features may be available for all VENICE hardware variants.



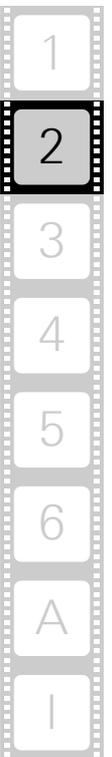


# General Information



Fast paced media production environments need dynamic solutions. The new graphical user interface of VENICE in its version 3.0 provides a more intuitive and easier to use look and feel for the operator – for example choosing a new operation mode is just one click away. Also for the first time the new version comes with a comprehensive user level management.

The setup concept and structure of the new user interface in its version 3.0 are described in this chapter. Furthermore, you find information about the key features of the software, about file types and audio, and instructions about how to start the program and connect to the channels.



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## 2.1 Setup Concept and Structure

This section provides some general information about the setup concept and structure of the VENICE server, its software and this guide to familiarize you with it and the way the individual parts operate.

### 2.1.1 Structure of VENICE and Network Setup

The diagram below shows a possible basic setup of a VENICE system in a network as well as a sketch of the structure of the DVS system and its software, thereby indicating the relation and communication processes between the individual parts:

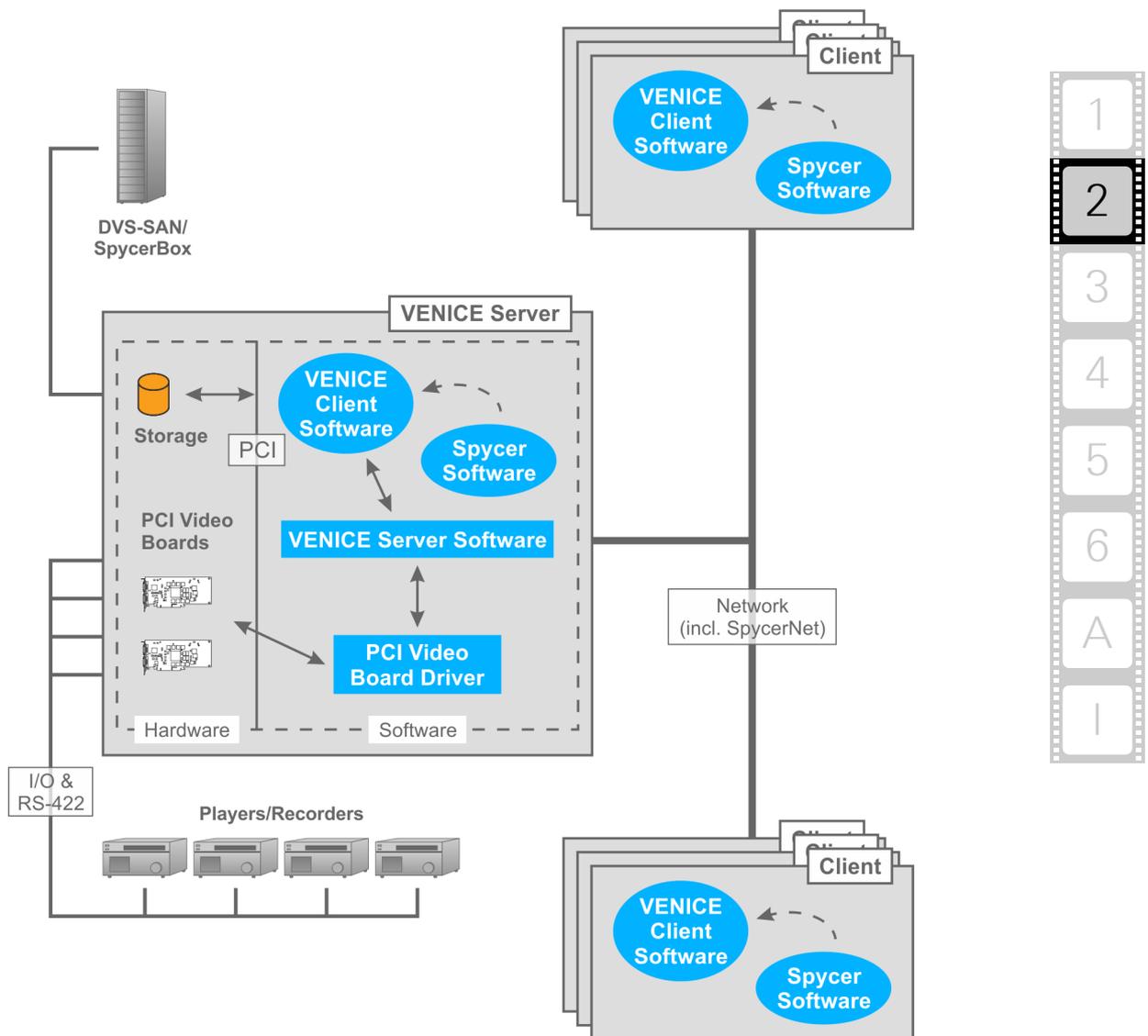


Figure 2-1: Structure of VENICE and network setup

## Video Boards and Driver

The PCIe video boards and their driver provide the functionality of the system for its usage as a video server. The PCIe video board driver controls the installed DVS video boards (video channels) and thus the in- and output of video and/or audio signals. One video board can provide up to two video channels (video channel pair). Furthermore, it enables the master/slave mode, where the respective video channel of VENICE can either be controlled by or controls an externally connected player or recorder.

## The VENICE Server Software

The VENICE server software installed on the system provides the video server capabilities for the locally or remotely installed VENICE client softwares. It communicates directly with the PCIe video board driver and therewith administrates the video channels of the system as well as directs the in- and output of each channel. For example, it determines whether one channel is free to be used or already occupied and what the respective channel should do (record/playout). It is installed as a service (demon) and will be operational shortly after the VENICE server has been started.

## The VENICE Client Software

The VENICE client software is the operator's interface to the server/video channels. It can be found already installed on the VENICE server, ready to be used locally. With it the operator can connect to the server (i.e. to the VENICE server software) via network and allocate one of the video channels to control record or playout operations. However, the VENICE client software can also be installed on any network client for a remote control of the server. It is available for various operating systems (see section "System Requirements" on page 1-6). After its installation, the VENICE client software can be used the same way as the locally installed one. With one instance of the software you can control different video channels of one or more VENICE servers at the same time. However, you can also run several instances of the software in parallel to control different video channels.

## Spycer

Spycer, the innovative content management software by DVS, is required by the VENICE client software, for example, for data management purposes. With it you will be able to select a path and/or file via a dialog window from the user interface of the VENICE client software. Additionally, because Spycer is installed as a separate application, it can be used independently from the DVS software.

With Spycer you can manage any content stored on the system or a connected storage easily. It is a software application capable of handling large amounts of video data and their corresponding metadata,

providing you with integrated browse, search and management tools to retrieve data and gather information about them locally as well as via a network (SpycerNet). Additionally, it can be used to preview clips.

On the VENICE server the Spycer application is already installed, providing the feature set. On client systems it must be installed separately. Furthermore, for the full feature set a license must be available, otherwise it will run as Spycer Basic (providing basic features only). Further information about Spycer, its installation as well as the SpycerNet can be found in the "Spycer" user guide.



The record scheduler is part of the Spycer user interface but provides its features for VENICE. It is described in section "Recording with the Record Scheduler" on page 4-43.

### Other Systems in the Network

Other systems in the network may share with the VENICE server the content on its storage for further processing. If the native storage of VENICE is not large enough for your needs, it can be expanded easily by connecting further DVS storage systems, such as a DVS-SAN or SpycerBox.

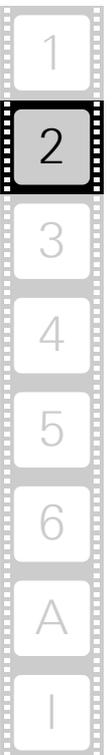


For the sharing of content with the VENICE server via other connections than an Ethernet connection third-party software and/or licenses may be required.

## 2.1.2 User Level Management

The VENICE client software provides from version 3.0 a user level management. This allows even untrained personnel to operate the system and presets or projects are protected. Users need to log in when connecting to a video channel. Each user level is accessible when entering the respective password given by the system administrator. The user levels can be changed at any time without disconnecting the channel. This way, the 'Administrator' or 'Superuser' can log into an open session and make changes to the settings. For this select the option **User level...** from the menu **Options** (see section "The 'Options' Menu" on page 3-5). There are three user levels available:

- User
  - Does not need a password to work with the software (limited feature set)
  - Can select scenarios, projects and presets
  - Cannot configure scenarios, projects and presets



- Superuser
  - Needs password to log in
  - Has all user rights of user level 'User' and additional rights as 'Superuser'
  - Can use scenarios, projects and presets
  - Can configure and save scenarios, projects and presets
- Administrator
  - Needs password to log in
  - Has all user rights of user level 'User' and 'Superuser' as well as additional rights as 'Administrator'
  - Can use scenarios, projects and presets
  - Can configure and save changes to scenarios, projects and presets
  - Can configure server settings

### 2.1.3 Concept of this User Guide

This user guide reflects the user level management in the VENICE client software as described in section "User Level Management" on page 2-5. The available features within a user level are a subset of the next higher user level, as shown in the following:

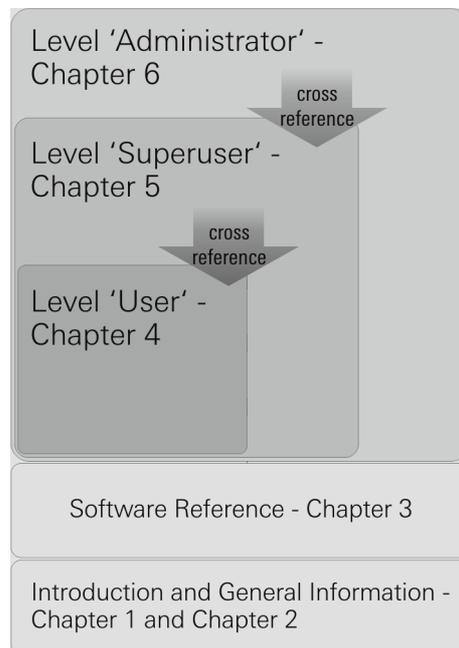


Figure 2-2: Subset of user rights in the VENICE client software

Chapters 1 (see chapter "Introduction" on page 1-1) and 2 (see chapter "General Information" on page 2-1) offer general information, valid for all user levels. Chapter 3 (see chapter "Software Reference" on page 3-1) offers a complete overview of the user interface, valid for all user levels as well.

The chapters 4 to 6 represent the user levels of the software. Chapter 4 (see chapter “Level User” on page 4-1) describes all features and available functions accessible with user level ‘User’. The ‘Superuser’ as described in chapter 5, can access all features of the level ‘User’ and some additional functions within his own user level (see chapter “Level Superuser” on page 5-1). The user ‘Administrator’ is able to access features of all other user levels and additional ones within his own user level which is described in chapter 6 (see chapter “Level Administrator” on page 6-1). The chapters describe the features that are only available in the respective own user level. The connection between the subsets of available features in the different user levels are made by cross references in this user guide.

## 2.2 Key Features of the Software

VENICE is a Media Production Hub especially designed for broadcast studio production environments. It is a scalable multi-channel system (2 or 4 channels per unit, multiple units can be clustered) that offers you ingest, playout, transfer and transcoding functions in one single box. The open software structure combines video and IT workflows in broadcast environments. VENICE comes with its own user interface, designed and developed together with the hardware. The VENICE client software gives you the possibility to control and operate the system from any location at any time. The four major functions of the software can be summarized as in the following:



Figure 2-3: Features combined in the VENICE client software

### Ingest

To perform e.g. multi-camera or file ingest operations, the VENICE client software must be in the **INGEST MODE** (see section “Selecting an Operation Mode” on page 4-14). All operating elements and configuration options in the ingest mode are described in chapter “General Information” on page 2-1.



In the ingest mode you have the following possibilities at hand (depending on the user level):

*For user level 'Superuser' and higher*

- You can configure all input related settings (see section “Preconfiguring the VENICE Client Software” on page 5-3 and section “Configuration” on page 5-15).

*For user level 'User' and higher*

- You can control the VENICE server for a record of clips.
- You can control an externally connected device, for example, to verify a position and set in- and/or outpoints.
- You can control the externally connected device for a playout operation while simultaneously recording with the VENICE server.
- You can set the VENICE server in slave mode for a remote controlled record.

For further information about how to carry out ingest operations see section “Recording with the VENICE Server” on page 4-22.

## Playout

To perform e.g. on-air or studio playout operations, the VENICE client software must be in the **PLAYOUT MODE** (see section “Selecting an Operation Mode” on page 4-14). All operating elements and configuration options in the playout mode are described in chapter “General Information” on page 2-1.

In the playout mode you have the following possibilities at hand (depending on the user level):

*For user level 'Superuser' and higher*

- You can configure all output related settings (see section “Preconfiguring the VENICE Client Software” on page 5-3 and section “Configuration” on page 5-15).

*For user level 'User' and higher*

- You can control the VENICE server for a playout of clips.
- You can control an externally connected device, for example, to verify a position and set in- and/or outpoints.
- You can control an externally connected device for a simultaneous record operation (manual crash or autoedit record).
- You can set the VENICE server in slave mode for a remote controlled playout from an externally connected device.

For further information about how to carry out playout operations see section “Playing Out with the VENICE Server” on page 4-56.

## Transfer

Broadcast networks require new and innovative solutions for handling immense amounts of data as well as different systems. One of the largest challenges in a broadcast workflow is the sharing of content within your network so that it becomes immediately available to everybody. Increasing numbers of audio and video files not only lead to an increasing number of metadata that needs to be handled. To be able to control these amounts of data, DVS offers the Spycer software that is fully integrated into the VENICE environment.

Spycer helps you to organize the data: from file ingest and editing to transfer and check-in of the metadata to MAM or production systems. For example, Spycer accesses Avid ISIS storage and Interplay PAM, this way enabling you to perform live video ingest via HD-SDI and file ingest from Professional Discs and P2 media devices.

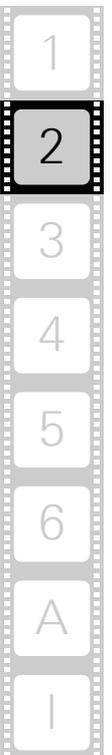
Since data management and data transfers are performed via the Spycer software, you find all necessary information about it in the "Spycer" user guide.

## Transform

To transform single clips or even lists into a certain file format, the VENICE client software must be in the **TRANSFORM MODE** (see section "Selecting an Operation Mode" on page 4-14). All operating elements and configuration options in the transform mode are described in chapter "General Information" on page 2-1.

In the transform mode you can convert video and audio material to different file formats. If possible, the file conversion (transcoding) will be performed in hardware at a faster render speed. In addition, the VENICE client software offers you a powerful transwrapping engine. By eliminating decoding and encoding processes, VENICE maintains the high quality of the source material and saves valuable time especially in fast media turnaround scenarios. Transwrapping will be used within head- and tail cutting, if source and target file format are identical. Supported are all iFrame-only codecs such as AVC/H.264, AAC, QuickTime and some long GOPs such as XDCAM HD and GXF.

For further information about how to configure and how to carry out transform operations see section "Performing the Transforming Operation" on page 4-72.



## 2.3 Starting the Program

This section provides you with a description of how to start the VENICE client software. With one instance of the software you can control different video channels of one or more VENICE servers at the same time and even perform multi-device operations via channel groups. However, you can also run several instances of the software in parallel, for example, to have them side-by-side on the screen. For this you simply have to perform one of the following starting operations once again.



The following information is valid for all user levels (see section "User Level Management" on page 2-5).

### 2.3.1 Starting the Software under Linux

To start the software under the Linux operating system, perform the following:

- Select from the **Applications** menu of Linux the entry **Sound & Video » Venice**.  
Alternatively, you may also start the program from a command line (terminal) by entering `venice`.

This will initiate the VENICE client software by DVS and you can start working with it (see chapter "Software Reference" on page 3-1).

### 2.3.2 Starting the Software under Mac OS

To start the software under Mac OS, perform the following:

- Select from the *Applications* folder of Mac OS the entry `Venice.app`.

This will initiate the VENICE client software by DVS and you can start working with it (see chapter "Software Reference" on page 3-1).

### 2.3.3 Starting the Software under Windows

To start the software under the Windows operating system, perform the following:

- Select from the **START** button menu of Windows on the submenu the entry for the DVS software (for example, **All Programs » DVS Venice**).  
Alternatively, you may also start the program via the VENICE icon available on the desktop of Windows.

This will initiate the VENICE client software by DVS and you can start working with it (see chapter "Software Reference" on page 3-1).

## 2.4 Connecting to a Video Channel

Right after starting the software (see section “Starting the Program” on page 2-10) the channel connection tab will be displayed. It lists the video channels of all VENICE servers that could be found in the network:

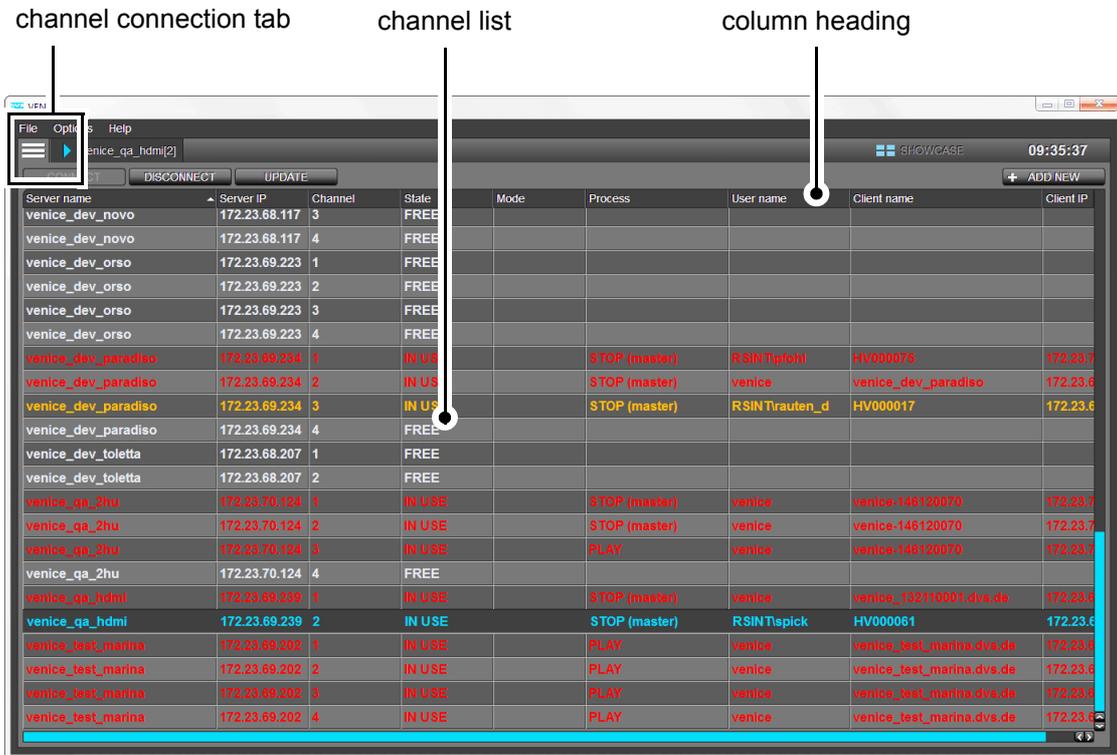
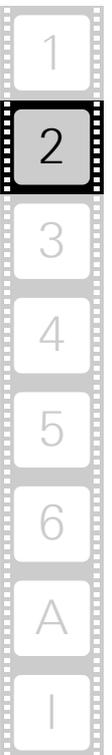


Figure 2-4: The channel connection tab

The channel names and all other channel related information are displayed in the channel list. In the top area of the channel connection tab are the column headings of the channel list that can be used for sorting. In the lower area of the channel connection tab you find the following buttons:

Item	Function
	Position: top left of the user interface
	This button updates the channel list.
	This buttons connects a selected channel.
	This button disconnects a selected channel.
	Position: top right of the user interface
	This button opens a dialog window with an entry field to select a channel manually.



All information in the channel list are displayed in different colors which mean the following:

Color	State	Explanation
gray	FREE	The video channel is free and can be used.
dark-gray	OFFLINE	The server is available in the network but the video channel (VENICE server software) cannot be reached.
red	IN USE	The video channel is occupied by another user and cannot be used.
orange	IN USE	The connection to the video channel has been terminated incorrectly. It may not be in use anymore and you can connect to it. However, if unsure about its state, contact the last user of the channel.
blue	IN USE	The video channel is occupied by me.

With the channel connection tab you can connect to a VENICE server and allocate one or more video channels. Once a connection is successfully established and a project has been selected, you have full control over this channel and you can use it for your tasks.



The following steps have to be performed with the VENICE client software locally installed on the VENICE server as well as with a remote installed one.

You can connect to a maximum of 12 channels with one user interface when several VENICE systems are available in the network.

To connect to one of the video channels of the VENICE server, perform the following:

- In the list identify the system you want to work on, e.g. via its computer name or its IP address.
- Then select a free channel from this system and press the button **CONNECT** or double-click the respective channel in the list.

With this the connection will be established: First the VENICE server is connected and then the video channel will be requested and allocated. If either of these connection steps fails, you will receive an appropriate error message.

Right after a successful connection to a video channel you will be asked to select a project or to create a new project for this channel. This is described in section "Selecting a Project" on page 2-13.

By performing the above mentioned steps repeatedly, you can connect to as many video channels as you want.



To control other video channels at the same time, you can also run several instances of the VENICE client software simultaneously.

Once a connection is successfully established, the respective channel (device) is 'IN USE'. To connect to this video channel, for example, from another VENICE client software, it must be freed first (see section "Disconnecting and Freeing a Video Channel" on page 2-24).

## Selecting a Project

After the successful connection to a video channel a window with the recently used projects will be displayed. The last ten project files will be listed:

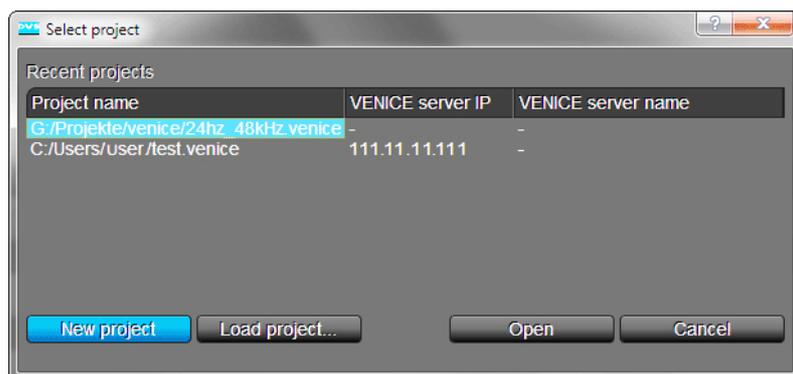


Figure 2-5: Selecting a project



When creating a new project as 'User', the login window of the VENICE user level management will open and prompt you to enter the password for at least the 'Superuser'. For further information see section "User Level Management" on page 2-5.

- To open a project, select one of the project files and press the button **OPEN** or double-click the project file in the list.

Alternatively, you can also open one that is not shown in the list with the button **LOAD PROJECT...** or start a new project with the button **NEW PROJECT**.

Once a project has been opened, the connected video channel will be shown in another tab of the user interface and you can begin working with the video channel.



For further information about project files see section "Projects" on page 2-18.

- To create a new project, press the button **NEW PROJECT**.



This will open the login window of the VENICE user level management and prompt you to log in with the user rights of at least 'Superuser' as in the following figure:

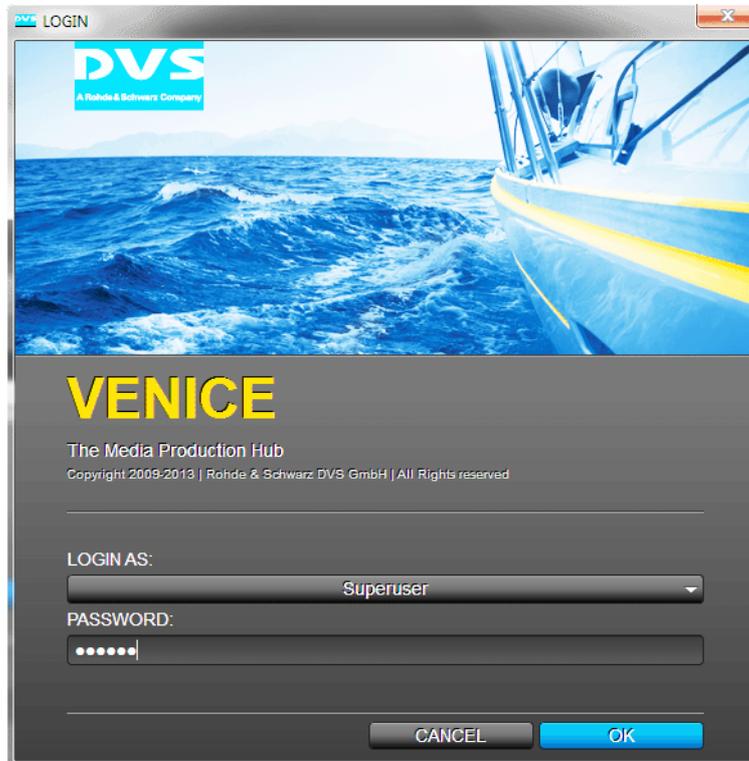


Figure 2-6: Login window

- Enter your password in the respective line and press OK.

The channel will be opened in the video channel tab and you can begin working with it.

### Further Features of the Channel Connection Tab

The channel connection tab provides the following features in addition:

- The columns of the channel list can be resized.
- The channel list can be sorted by clicking in a column heading.
- The channel list is built up when the software is started. With the button **UPDATE** (keyboard shortcut [F5]) you can update the channel list manually at any time.
- The channel list may not show all channels available in the network. With the button **ADD NEW** you can add a channel manually to the list by specifying either its IP address or the server's name and assigning a channel number to it:

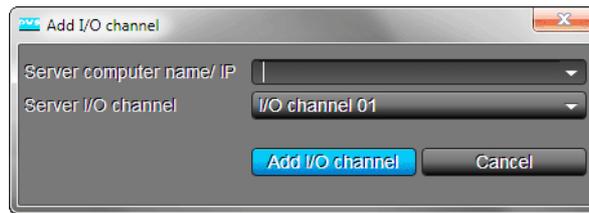
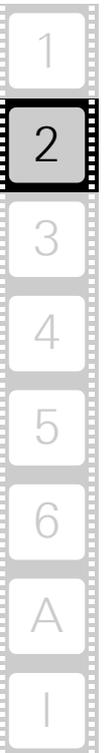


Figure 2-7: Adding a video channel manually

- You can disconnect a channel that has been allocated by you by selecting the video channel from the channel list and pressing the button **DISCONNECT**.
- To work with the channel connection tab, you can also use the context menu of the channel list (right-click mouse operation).



A freeing/disconnection of video channels can be forced at the VENICE server. Further information about this can be found in chapter “Level Administrator” on page 6-1.



## 2.5 Basic File Types

The VENICE client software can be preconfigured for often recurring tasks so that operators are not required to do this time and again during their work. It is up to the management/administrator (user level 'Superuser' or 'Administrator') to decide how detailed this preconfiguration should be.

The VENICE client software offers various files that can be used for a preconfiguration and they are described in this section. All files can be saved and loaded whenever required.

### 2.5.1 Presets

Via presets you can easily set up a video channel tab for often recurring tasks, such as records from a particular device in a certain file/video format or layouts of prepared VENICE playlists in a particular format. Presets store the layout of the software (e.g. operation mode and state of the user interface) as well as the configuration settings, i.e. they store everything of a video channel tab but content (such as clip names, paths, or other presets). Presets are now stored in project files (see section "Projects" on page 2-18), from version 3.0 of the VENICE client software.



In the software version prior 3.0 presets were stored in so called preset files (file extension *\*.vprst*). When upgrading to software version 3.0 the preset files that were created in older software version cannot be used anymore.

Presets can be created and administered with the drop-down list 'preset' in the option **SETTINGS** of the configuration options (see section "Configuration Options" on page 3-18). With this drop-down list you can select already created presets, save a preset or remove one from the list directly in the user interface.

To load a preset into the user interface, use the option **Update current preset** or simply select the respective preset from the preset list. To delete the currently active preset from the preset list, use the option **Remove current preset**. The preset will be deleted from the project file as well when saving it the next time. To save a preset, use the option **Save as new preset...**

### 2.5.2 Defaults

For new projects you can store settings (defaults). They can be saved and loaded via the **Options** menu (see section "The 'Options' Menu" on page 3-5). The defaults store the same settings as presets (see section "Projects" on page 2-18) and they will be used each time a new

project is initialized (see, for example, section “Selecting a Project” on page 2-13). However, already opened projects can be reset to the defaults as well with the option **Reset current settings to defaults** in the menu **Options** (see section “The ‘Options’ Menu” on page 3-5).

### 2.5.3 Playlists, Batch Lists and Transforming lists

With the VENICE client software you can create lists that can be used for playout, batch record or transforming tasks. They can be created and administered either with the playlist, batch record list or transform list editor (see section “The List Editors” on page 3-27). There you can add any number of video and audio clips in any sequence you like. On playlists and transforming lists it is also possible to link video to audio clips so that they are used together, and to have VENICE metaclips (see section “Metaclips” on page 2-17) as clips/items on the list.

File extension:      *\*.vp1st*                      Playlist, batch or transforming list file

These files are normally stored locally (on a shared or central storage as well) where the VENICE client software is running, but can be transferred easily between systems by copying/moving their files and can then be used immediately. For further details about how to use lists in the VENICE client software see section “The List Editors” on page 4-76.

### 2.5.4 Metaclips

VENICE metaclips are used as a container for video and audio clips. They are normal text files that detail among others the location of the included clips.

During a record with VENICE, metaclips are created automatically and stored on the main storage same as the actual data (see section “The Captured Files” on page 4-27). They can also be created in the list editor (context menu of one or several clip(s)) in the VENICE client software (see section “The List Editors” on page 4-76) or via Spycer (see the “Spycer” user guide for more information). For playout and transforming tasks you can use VENICE metaclips as source data just as any other clip (either as single clips or on play- and transforming lists).

Normally one video and one or more audio clips are described in a metaclip. However, it is also possible to reference to several video/audio clips in a metaclip (for example for a playout in the 3D mode) and they would be played out successively as listed in the metaclip.

File extension:      *\*.vamc*                      Video/audio metaclip file



## 2.5.5 Projects

VENICE project files can be used to make a complete snapshot of the current state of a video channel tab. In other words they store everything that is saved via presets (see section “Presets” on page 2-16) and, furthermore, store content as well.

File extension:     *\*.venice*             Project file

These files are normally stored locally where the VENICE client software is running but can be transferred easily between systems by copying/moving their files and can then be used immediately. They store all information of stored presets (see section “Presets” on page 2-16) as well.

Projects are administered via the **File** menu of the main menu. For further information about it see the section “The ‘File’ Menu” on page 3-3.

When connecting to a video channel, a window will be displayed showing you the recently used projects. Then you can select one for loading or start a new one (see section “Selecting a Project” on page 2-13).

How to create a project file depends on whether it should be created for a record, playout or transform operation and is described in the respective sections of the chapter “Level Superuser” on page 5-1.

## 2.5.6 Scenarios

A scenario can be described as a complete snapshot of the user interface. Scenarios can contain all configurations, modes, acquired video channels and its names, projects and presets, and the content that was loaded in a single file. The benefit of a scenario is the fast setup of large production scenarios for multiple channels, even across several servers.

File extension:     *\*.venicescenario*             Scenario file

These files are normally stored locally where the VENICE client software is running but can be transferred easily between systems by copying/moving their files and can then be used immediately.

- All options and functions to administer the scenario files can be found in the main menu (see section “The Main Menu” on page 3-3).



A scenario file can be opened before connecting to a channel. The VENICE client software will connect to the channels and load all settings automatically, as stored in the scenario file.

To perform this, use the **File** menu to the top right of the user interface with its option **Open scenario...**

How to create a scenario depends on whether it should be created for a record, playout or transform operation and is described in the respective sections of the chapter “Level Superuser” on page 5-1.

### Using scenarios

The menu options applying to scenarios can be found in the menu **File**.

If you want to e.g. save a scenario (see section “Scenarios” on page 2-18) under a certain name, perform the following:

- After having completed the scenario to your purposes open the menu **File**.

This will open the menu with all its options and functions for selection. As the scenario refers to the whole user interface there is no need to be connected to a certain video channel.

- Select the option **Save scenario as...**

This will open a directory window where you can select the folder you want to save your scenario to.

- Type the name of the scenario in the **File name** entry field and select the directory you want to save the scenario to.

In the **Files of type** drop-down list the file ending `*.venicescenario` should be selected.

- To confirm click the button **SAVE** or press [Enter] on your keyboard.

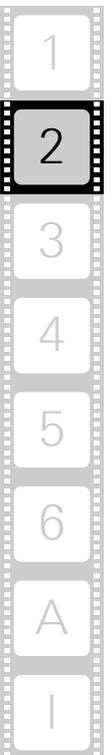


The menu option **Save scenario as...** can be used to save an already stored and then loaded scenario under a different name and location, too.

- The next time you work with the VENICE client software the scenario with all connected video channels and settings that were made will be available for selection. For this purpose you can use the **File** menu with its option **Open scenario...**



Opening scenarios can be performed by using commands, too. Simply enter `venice -autoload=<file name>` with the extension in a command line. The selected directory must be the one of the VENICE client software. If the scenario file is not located in the same folder, you will have to enter the path for the file, too.



## 2.6 About Audio

The DVS software provides a full support of audio during record or playout operations. Up to 16 different channels of audio can be in- or output by the system. The audio data can be accessed and processed in the software as easily as the video material.

When performing a record operation, the audio data can be input either embedded in the video signal (audio in video, AIV) or via the separate digital audio connectors. You may have both signals connected to the DVS system and prior to a record you have to specify the type of signal that the system has to capture (see section “Configuring the Input Settings” on page 5-4). However, for an input of audio data a sampling rate of 48 kHz is supported only. In case you want to capture audio alone, a video signal has to be present at the system’s input and the video format settings have to be set accordingly. Regarding the created files, when no container format has been selected, you can choose between several file formats for audio (e.g. \*.aif or \*.wav). Additionally you can specify whether multiple channel files (one file per record containing multiple channels of audio) or mono files (if applicable, several files containing each a mono channel) should be written.

On the other hand, when performing a playout operation, you do not have to configure the way a playout of audio is performed. It will be played out simultaneously, embedded in the SDI video signal (AIV) as well as via the digital audio output connectors.

The configuration options provide in each operation mode 16 audio peakmeters – one for each audio channel – to monitor audio during record or playout operations:

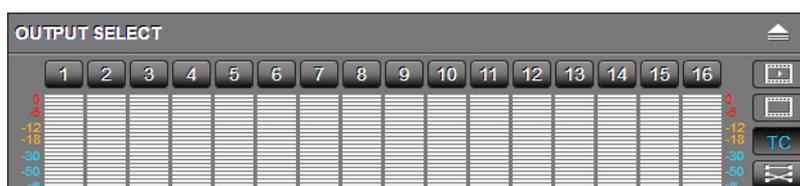


Figure 2-8: Audio peakmeters showing 16 audio channels



The peakmeters show the audio that is streamed via network. They can serve as a point of reference and should not be used for precision measuring.

The peakmeter for the playout/transform mode can be found among the **OUTPUT SELECT** option and for the ingest mode under the **INPUT SELECT** option (see section “Configuration Options” on page 3-18).

Configuring the audio stream is possible for all operation modes by clicking the button **ROUTING**. The appearing dialog window will give you the ability to switch audio channels or set the volume. For further information about this see section “Audio Routing” on page 4-16.

Additionally, there is the audio monitoring tool available which allows you to adapt the streamed audio that can be heard at your workstation (see section “Audio Monitoring” on page 4-86).

## 2.7 About Timecode / Frame Number Fields

The DVS software provides various fields where data in timecode format is provided or an entry in such a format is necessary. The timecode format is hh:mm:ss:ff (hours, minutes, seconds, and frame number).



If you see --:--:--:-- or --- displayed in an entry field, a value has not been specified so far. To delete a once made entry, you can use the delete buttons (toggle buttons) as described in section “Operating Elements” on page 3-15.

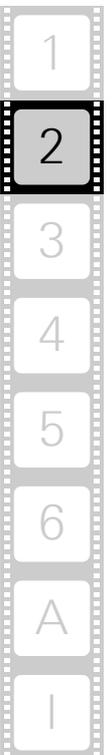
### Drop-frame Timecode Indication

The last colon of the timecode format may be displayed in the software as a full stop. Then the timecode fields of the software will display, for example, 12:25.07 instead of 12:25:07. This indicates that the drop-frame timecode feature is activated. When entering timecode, the last colon can also be replaced by a full stop.

### Higher Frequencies and Timecode Format

In the user interface of the DVS software an asterisk may be added to the timecodes (e.g. 12:25:07\*). This will be the case when the video raster’s frequency exceeds 30 frames per second because the original timecode format is limited to frame rates as high as that. To account for video rasters with higher frequencies (e.g. 60 Hz), one timecode number is used for several video frames, meaning every second, third or fourth timecode provides the same timecode number (the frames notation (see below) is not affected). These repeated timecodes are shown in the user interface with an added asterisk and at the outputs they are particularly flagged as well. The standard timecodes that will be used for such procedures are 24 Hz, 25 Hz and 30 Hz: For example, a video raster frequency of 48 Hz is provided with a 24 Hz timecode, while a 60 Hz frequency receives a 30 Hz timecode. This will result in a doubling of the timecode numbers:

60 Hz @ 30 Hz TC	60 Hz
...00:00	...00:00
...00:00*	...00:01
...00:01	...00:02
...00:01*	...00:03
...	



60 Hz @ 30 Hz TC	60 Hz
...00:29	...00:58
...00:29*	...00:59
...01:00	...01:00
...01:00*	...01:01

At even higher frame rates (e.g. 90 Hz) the timecode numbers will be tripled, quadrupled etc., making a timecode handling of all common frequencies possible.

### Entering Timecode

When entering timecode in one of the software’s position or length indicators, it is not necessary to type in the timecode separators (colons). Simply place the cursor at the appropriate position (e.g. at the minute numbers) and enter the timecode numbers from there. After pressing [Enter] on your keyboard or selecting another item of the user interface, the entered timecode is accepted in the respective timecode field.

When you enter a timecode value that exceeds the raster’s frequency, the timecode will be recalculated (e.g. 00 : 00 : 02 : 47 will be set to 00 : 00 : 03 : 23 if raster is in 24 Hz). When entering a timecode value that exceeds the boundaries of the available timeline, it may be set to the lowest/highest possible value or not accepted at all.

### Switching the Notation

Position and length indicators can be switched from a display of the timecode notation to frame numbers and vice versa. For this you can use the context menu of a timecode/frame number field (e.g. the one of the position fields in the middle of the operating elements, see section “Operating Elements” on page 3-15).

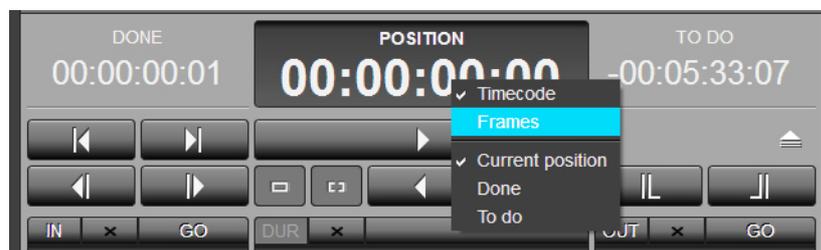


Figure 2-9: Context menu of the position fields

Select from the context menu the respective option. This will change the position and length indicators to the selected notation. It can be individually set for the operating elements of the player and recorder. Alternatively, you can use the **TIMECODE / FRAMES** options to switch the notation.

## 2.8 About Source Timecode

Some file formats for clips, e.g. *\*.mxf* files, are capable of storing more information than just their image content. These information are usually written in a specified format into the file headers which can be read and interpreted by different software applications that support these kind of information. Among the information stored you can find, for example, the name of the creator (usually the program that created the files), the creation time and date, and the timecode.

Most of the data stored in file headers and transmitted to the VENICE server during a capturing will only be recorded and given back again during a playout, if appropriate. However, DVS especially makes use of the timecode information.



The DVS software supports additional information such as source timecode in the *\*.dpx*, *\*.mov* as well as *\*.mxf* and Broadcast Wave file formats. However, some features (e.g. multiple timecodes or the editing of header data) are available for *\*.mxf* files only.

With the help of Spycer the header data, such as timecode or keycode information, can be adjusted to your liking (see the “Spycer” user guide for more information).

Timecode information stored in file headers (the so-called source timecode) can be used in the VENICE client software. For example, you can use clips that provide source timecodes during the playout of a playlist and regardless of the current position they will always show their source timecode. Then, prior to a playout you can decide whether the internal timecode should be given out as a timecode signal or the source timecodes provided by the files. The header is made up of the source and the material package. The timecode information of a header is stored in the material package and can be a start timecode and the duration. The footer of a file is a copy of the header regarding the timecode information. A file can contain the timecode information only in the header as well as in header and footer.



In certain MXF OP-1a files the timecode information can be stored per frame. The timecode is then written in the system item per frame.

Normally, image files capable of storing timecode information provide space for one timecode only in their header (generic source timecode). DVS systems, however, are able to receive (e.g. during a record) several timecodes incorporated in signals at various connectors. During a write procedure, i.e. when recording clips (*\*.mxf* files), they will write the received timecode information into the file headers. The ones additionally received will be stored at a location for user defined data in the header and usually cannot be interpreted by applications other than the ones developed by DVS. When processing such clips afterwards, for instance, with another DVS system, you may select between the various



timecodes provided by the clips which may give you more control over their position in a timeline.



Audio files equipped with source timecode usually provide a start timecode only and subsequent timecodes will be calculated.

When working with 50p or 60p material, a real 50p or 60p timecode must be present to avoid performance losses and/or drop frames.

## 2.9 Disconnecting and Freeing a Video Channel

When your work with the VENICE client software is finished, the allocated video channel should be freed again so that other users can use it for their tasks. If a video channel is not freed again, it will remain occupied by this instance of the VENICE client software, and no one else can connect to it.

To free a video channel, perform one of the following:

- Close the VENICE client software (see section “About Timecode / Frame Number Fields” on page 2-21) or
- use the menu option **Disconnect** on the **File** menu (see section “The ‘File’ Menu” on page 3-3) or
- use the menu option **Disconnect** on the context menu of a video channel tab or
- use the menu option **Disconnect** of the **CHANNEL** drop-down list on the channel administration tab (see section “Administering the Channels” on page 4-4) or
- use the button **DISCONNECT** on the channel connection tab to disconnect the video channel (see section “Selecting a Project” on page 2-13).

Then the connection to the respective video channel of the VENICE server will be severed and the channel will be free for others to use.



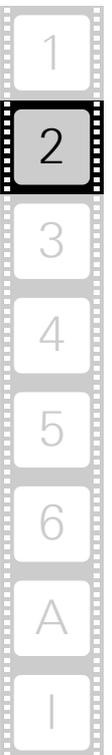
A freeing/disconnection of video channels can be forced at the VENICE server. Further information about this can be found in the “VENICE Administration and Configuration” user guide.

## 2.10 Exiting the Program

To end a running instance of the VENICE client software, perform the following:

- Select the option **Exit** on the **File** menu (*Mac: VENICE » Quit VENICE*) or press the key combination [Alt + F4] or [Ctrl + Q] (*Mac: [⌘ + Q]*) alternatively.

This will close the instance of the VENICE client software. In case a connection to one or more video channels is currently established, the connection(s) will be severed (see also section “Preconfiguring the VENICE Client Software” on page 5-3).





## Software Reference

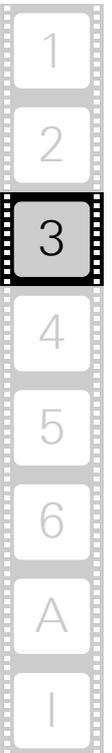


When having connected to a video channel as described in section “Connecting to a Video Channel” on page 2-11 and e.g. selected a project, you can begin working with the software. Depending on the user rights you have logged in with, different functions are accessible.

This chapter provides you with basic information about the VENICE client software. In addition to the information how to start and exit the program, it gives you a detailed reference for the program interface, all its tabs and menus. The items of the different tabs will be outlined, when necessary separately, for every operation mode and state.



Not all of the buttons and options described in this chapter are available for all user levels. Whenever you try to make use of a feature you have not been given access rights to, the login window will open up and prompt you to enter the password of the respective user level.



**In this chapter:**

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The 'File' Menu .....	3-3
The 'Options' Menu .....	3-5
The 'Help' Menu .....	3-6
The SHOWCASE View .....	3-8
The Channel Administration Items .....	3-9
The Show Case .....	3-10
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Operation Mode Settings .....	3-12
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## 3.1 The Main Menu

In the main menu you find all the settings and options to e.g. load, store or configure your project. It provides access to functions of a more general nature for the VENICE client software and you find it in the top left corner of the user interface:

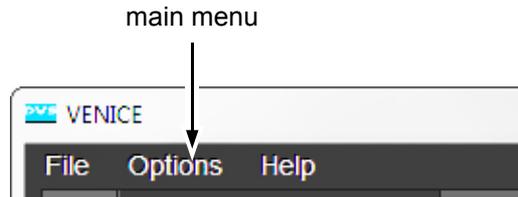


Figure 3-1: Main menu of the VENICE client software



The availability of the menu options depend on the type of tab that is selected. Most will be available when a video channel tab is active.

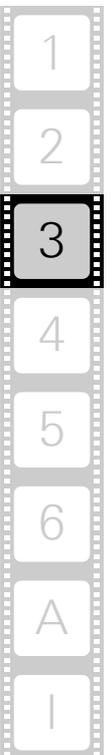
Not all features are accessible for all user levels.

For further information about the configuration options of the main menu see section “Preconfiguring the VENICE Client Software” on page 5-3.

The main menu contains the drop-down lists **File**, **Options** and **Help** that are detailed in the following subsections.

### 3.1.1 The 'File' Menu

The menu **File** provides menu options to e.g. open projects or groups, to save files or exit the program. In detail, it contains the following menu options:



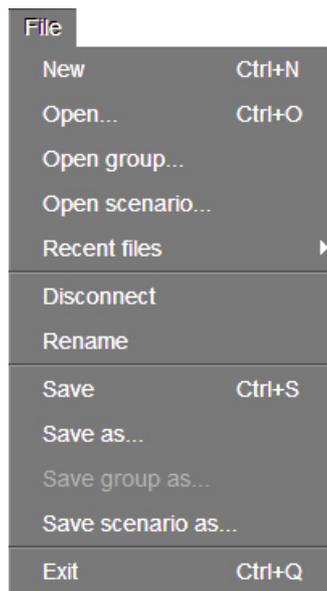


Figure 3-2: The menu 'File'

<b>New</b>	Starts a new project in the default settings of the software.
<b>Open...</b>	Allows you to select a project file and open it in the software.
<b>Open group...</b>	Allows you to select a group and open it in the software.
<b>Open scenario...</b>	Allows you to select a scenario and open it in the software.
<b>Recent files</b>	Details the recently opened files in a further list for selection.
<b>Disconnect</b>	Disconnects and frees the video channel (see section "Disconnecting and Freeing a Video Channel" on page 2-24).
<b>Rename</b>	Renames the currently opened video channel.
<b>Save</b>	Saves the currently opened project.
<b>Save as...</b>	Saves the currently opened project under a different name and/or location.
<b>Save group as...</b>	Saves the currently opened group under a different name and/or location.
<b>Save scenario as...</b>	Saves the currently opened scenario under a different name and/or location.
<b>Exit</b>	Closes the program.



For further information about file types see section "Preconfiguring the VENICE Client Software" on page 5-3.

### 3.1.2 The 'Options' Menu

The **Options** menu provides menu options to set and configure either the VENICE client software or a video channel. In detail, it contains the following menu options:

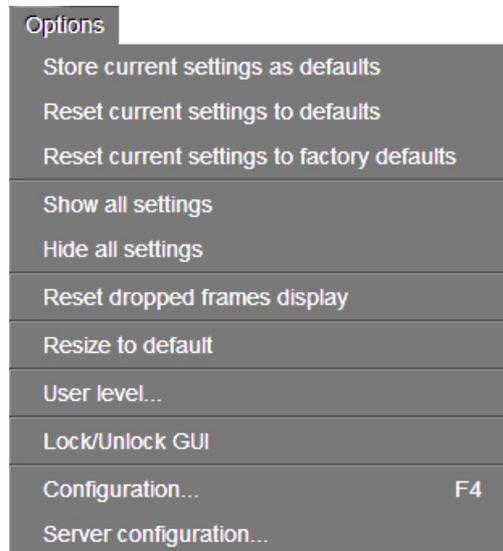


Figure 3-3: The menu 'Options'

<b>Store current settings as defaults</b>	Stores the software layout and the configuration settings as defaults (see section "Defaults" on page 2-16).
<b>Reset current settings to defaults</b>	Sets the current layout and configurations back to the settings that were stored as defaults.
<b>Reset current settings to factory defaults</b>	Sets the current layout and configurations back to the settings that were defined by DVS as defaults.
<b>Show all settings</b>	Expands all configuration options in a single step. Further information about this can be found in section "Configuring the Operation Mode" on page 5-3.
<b>Hide all settings</b>	Collapses all expanded configuration options in a single step. Further information about this can be found in section "Configuring the Operation Mode" on page 5-3.
<b>Reset dropped frames display</b>	Resets the dropped frames counter (see section "Message and Information Area" on page 3-21) back to zero.
<b>Resize to default</b>	Resizes the user interface to its default size again.



Some of the following options are accessible but only available for the user level 'Superuser' and/or higher. The option **Server configuration...** is only accessible for user level 'Administrator'.

<b>User level...</b>	<p>Opens the login window where you can change the user level or, when logged in as 'Administrator', where you can change the password of a user level as well.</p> <p> When changing from a higher to a lower user level, there is no need to type in the password.</p> <p>For further information about how to change the password of a user level as 'Administrator' see section "Changing the Password for a User Level" on page 6-16.</p>
<b>Lock/Unlock GUI</b>	Disables the items of the user interface.
<b>Configuration...</b>	<p>Opens a dialog window to set configurations for the active video channel tab. Most are valid for a single video channel. See section "Configuration" on page 5-15 for further information about this. This function will be available by pressing [F4] on your keyboard as well.</p>
<b>Server configuration...</b>	<p>Opens a dialog window to set server configurations see the section "Server Configuration" on page 6-13.</p>

### 3.1.3 The 'Help' Menu

With the menu options of the menu **Help** you can get, for example, additional information about the VENICE client software. It contains the following menu options:

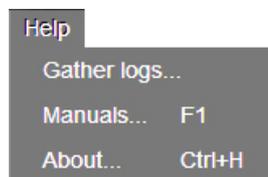
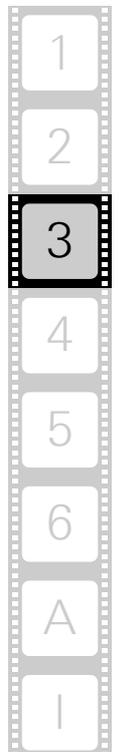


Figure 3-4: The menu 'Help'

<b>Gather logs...</b>	<p>Gathers log files from the server which detail the actions performed by and with the VENICE server. You may get asked by the DVS service department to send in these files as well as others in case of problems with VENICE. They will be saved at a location of your choice in an archive file.</p> <p> How to gather detailed real-time log files manually by using commands is described in section "Creating Log Files" on page 6-17</p>
<b>Manuels...</b>	<p>Accesses the online documentation of VENICE. It opens an overview page in HTML format.</p>
<b>About...</b>	<p>Displays further information about the VENICE client software (e.g. the version number of the software or additional license information).</p>



### 3.2 The SHOWCASE View

When switching to **SHOWCASE** view, all video channels that you are currently connected to are displayed in so called 'show cases'. Furthermore, you find drop-down lists with options to administer and configure the video channels or channel groups. In the **SHOWCASE** view you find the following:

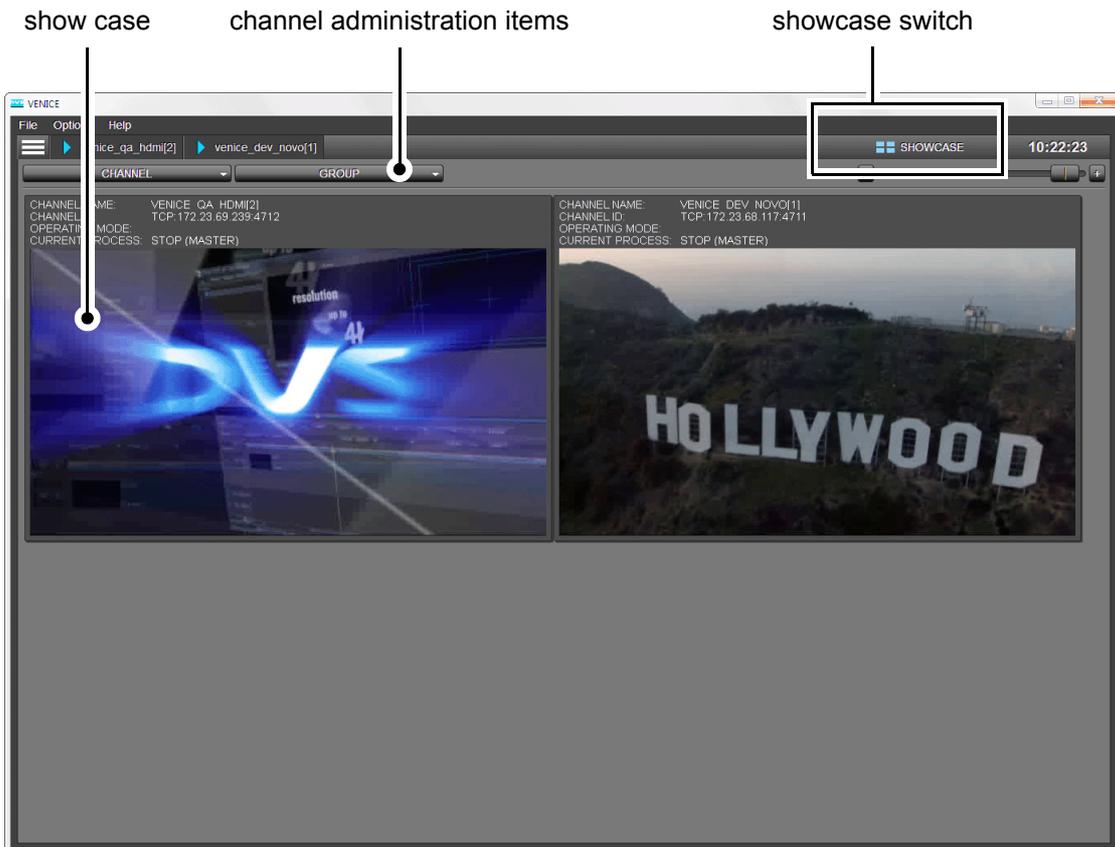


Figure 3-5: SHOWCASE view

The drop-down lists of the channel administration items and the show case are detailed in the following subsections.



From software version 3.0.2.16 upwards the channel's operation modes are indicated by frames in color red (ingest mode), blue (playout mode) and yellow (transform mode).

### 3.2.1 The Channel Administration Items

In the top left area of the **SHOWCASE** view you find drop-down lists with options to administer the video channels or a group of channels.



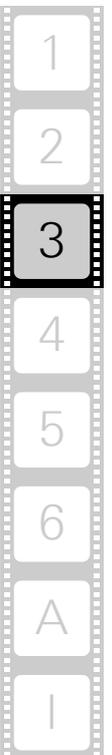
Figure 3-6: The channel administration items

The channel administration items are detailed in the following table:

Label	Item(s)	Description
CHANNEL	<b>Rename...</b>	Renames the video channel.
	<b>Show in the corresponding tab</b>	Switches to the respective video channel tab of the selected show case.
	<b>Disconnect</b>	Disconnects and frees a selected video channel (see section “Disconnecting and Freeing a Video Channel” on page 2-24).
GROUP	<b>New...</b>	Creates a new channel group. See section “Forming a Channel Group” on page 4-5.
	<b>Rename...</b>	Renames the channel group.
	<b>Modify...</b>	Opens a dialog window with options to modify the selected group, e.g. to append a new channel to the group or to set 3D mode.
	<b>Resolve...</b>	Dissolves the group; the tab of the group as well as the show case of the group on the channel administration tab will be closed.



For further information about how to form a channel group see section “Channel Groups” on page 4-5. For information about the configurations that can be made see section “Administering a Channel Group” on page 4-8.



### 3.2.2 The Show Case

In the **SHOWCASE** view, the connected channels are displayed in so called 'show cases'.



When having formed a group (see section "Channel Groups" on page 4-5), a further show case that represents the group will appear in the **SHOWCASE** view. The descriptions in this section are valid for the group show case as well.

The show case in the **SHOWCASE** view looks as the following:



Figure 3-7: Show case of a video channel

Above the display to the left you find the channel related information like channel name, channel ID, operation mode as well as the process that is currently running.

Via the slider at the top right of the **SHOWCASE** view you can configure the size of the displayed show cases:



Figure 3-8: Slider for adjusting size

- Use either the slider or the buttons to its left and right or
- point the mouse cursor over the slider and turn the mouse wheel to change the size of the show cases to your requirements.

### 3.3 The Video Channel Tab

Once the tab of a connected video channel has been selected, the controls for this channel are enabled. The following figure shows the video channel tab in the playout mode:

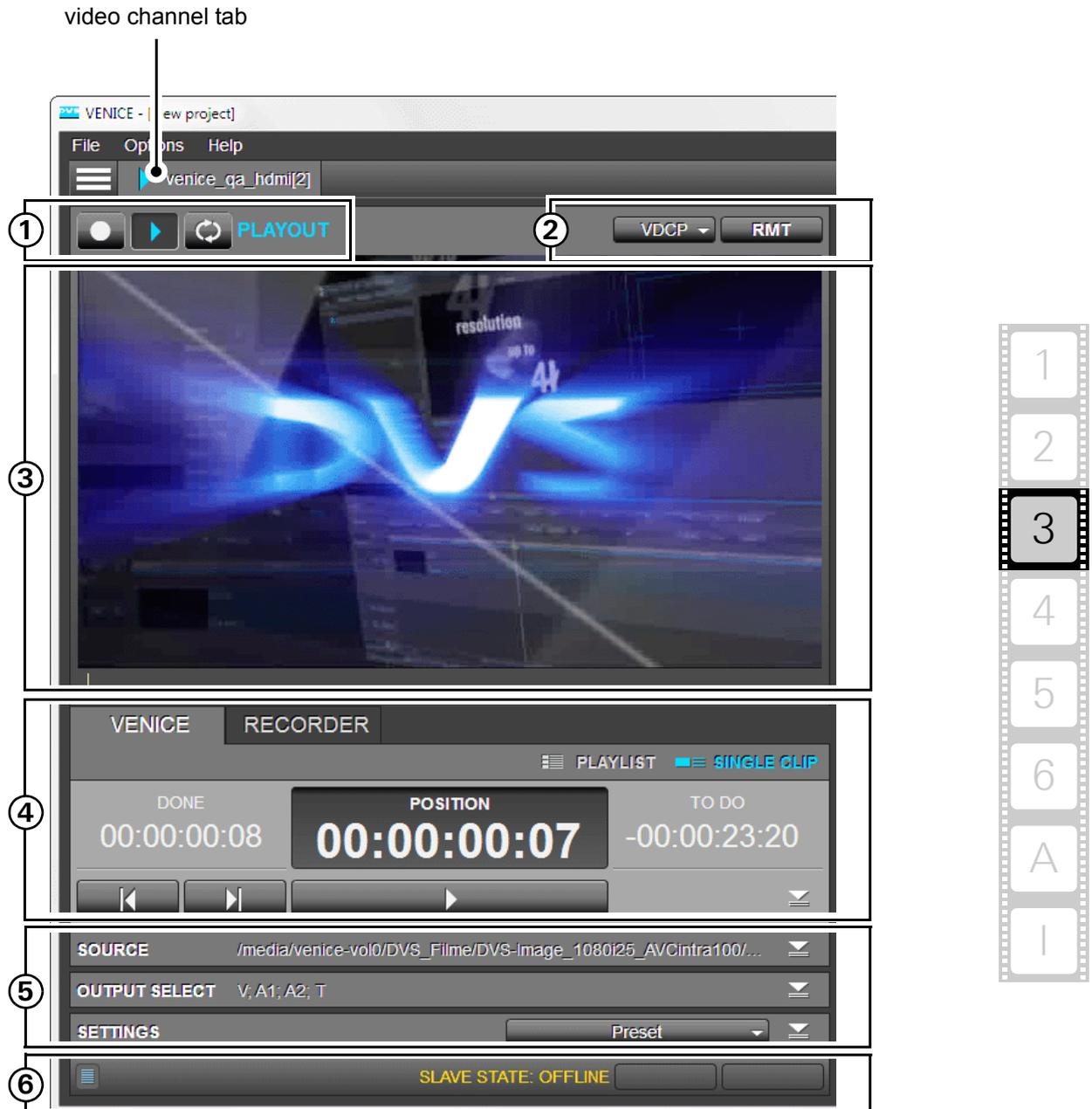


Figure 3-9: The video channel tab in playout mode

1. Operation mode settings
2. Remote settings
3. The video overlay
4. Operating elements

- 5. Configuration options
- 6. Messages and information area



By right-clicking a video channel tab, a context menu can be invoked that provides you with the options **Disconnect**, **Re-name** and **Configuration...** which apply only to this channel tab. For information about the usage of these options see section “The Main Menu” on page 3-3.

All items of the video channel tab in all operation modes are detailed in the following subsections.

### 3.3.1 Operation Mode Settings

All items of the operation mode settings are indicated and detailed for all operation modes in the following figure and table:



For further information about the configurations that can be made with the operation mode settings see section “General Usage of the Video Channel Tab” on page 4-14.

operation mode settings

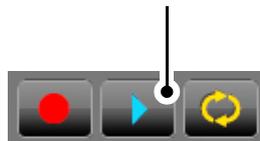


Figure 3-10: Operation mode settings

**Table 3-1: Operation mode settings for ingest, playout and transform mode**

Button	Function	Description
	<b>INGEST MODE</b>	The VENICE server assumes the role of a recorder.
	<b>PLAYOUT MODE</b>	The VENICE server assumes the role of a player.
	<b>TRANS-FORM MODE</b>	Video and audio material can be converted to different file formats.



The operation mode settings on the channel group tab (see section “General Usage of the Channel Group” on page 4-9) do not contain the button for the transform mode. For the operation mode settings that are available on the channel group tab, apply the descriptions of the table above.

### 3.3.2 Remote Settings

The remote settings contain a drop-down list where the respective protocol can be selected and the remote button to activate remote control.



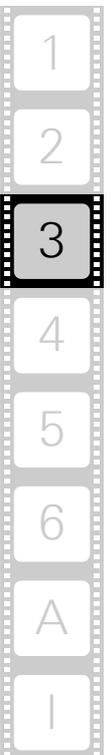
Figure 3-11: Remote settings

Table 3-2: Remote settings

Label	Item(s)	Description
protocol	<b>RS-422 SONY</b>	Uses a Sony 9-pin (RS-422) protocol to control the video channel in the slave mode.
	<b>VDCP</b>	Uses a VDCP (RS-422) protocol to control the video channel in the slave mode. Used for ingest and playout operations.
	<b>MOS</b>	Uses a MOS (Ethernet) protocol to control the video channel in the slave mode. Used for playout operations.
	<b>RMT OFF</b>	Slave mode is off.
	<b>RMT ON</b>	Slave mode is on.



On the channel group tab (see section “General Usage of the Channel Group” on page 4-9) the remote settings vanish and you find a slider instead.



### 3.3.3 The Video Overlay

In the upper part of the video channel tab you can find the video overlay; the area where the video content is displayed:



Figure 3-12: The video overlay

The displayed content differs in the operation modes. In the playout mode the video overlay shows either the input signal or the clips played out by the VENICE server, depending on the activated tab of the operation switches in the operating elements (see section “Operating Elements” on page 3-15). In the ingest mode the video overlay will always show the signal that is present at the input of the video channel.



The size of the video overlay(s) on the channel group tab (see section “General Usage of the Channel Group” on page 4-9) can be adjusted by a slider on the top right in the operation mode settings (see section “Operation Mode Settings” on page 3-12).

The video overlay shows a compressed proxy and is therefore no tool to check the quality of the content shown in it.

### 3.3.4 Operating Elements

The operating elements offer you all functions to perform the playout, ingest or transform operations. This part of the user interface can be divided into four components as shown in the figure below:



Figure 3-13: Operating elements in playout mode

1. Operation switches
2. Position fields
3. Operation controls
4. Position controls

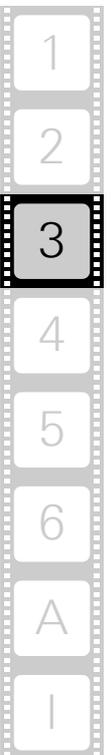
All items of the operating elements in their different operation modes are detailed in the following tables:



For the operating elements on the channel group tab (see section “General Usage of the Channel Group” on page 4-9) in the operation modes ingest and playout apply the following descriptions as well if present in the user interface.

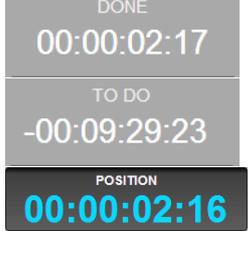
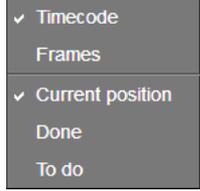
**Table 3-3: All items of the operation switches in playout/ingest/transform mode**

Item	Function
<p>RECORDER</p> <p>PLAYER</p> <p>VENICE</p>	The tabs <b>RECORDER</b> , <b>PLAYER</b> and <b>VENICE</b> enable the operation controls and switches to perform playout or record operations for the VENICE system or an externally connected device.
<p>SINGLE CLIP</p> <p>PLAYLIST</p>	You can select between the playout of <b>SINGLE CLIP</b> or <b>PLAYLIST</b> in the playout mode.
<p>CRASH</p>	By switching the tabs <b>RECORDER</b> (playout mode) or <b>VENICE</b> (ingest mode) you can select <b>CRASH</b> for a crash record in the operation switches.



	By switching to the tabs <b>RECORDER</b> (playout mode) or <b>VENICE</b> (ingest mode) you can select <b>AUTO EDIT</b> in the operation switches.
	By switching to the tab <b>VENICE</b> in the ingest mode you can select <b>BATCH LIST</b> in the operation switches.
	By switching to the tab <b>VENICE</b> in the ingest mode you can select <b>BATCH SELECTION</b> .
  	With these operation switches you determine the transform mode of a transforming list. You can choose between <b>SINGLE CLIP</b> , <b>LIST BATCH</b> and <b>LIST COMPLETE</b> .

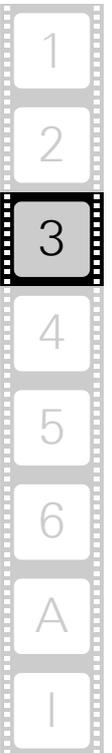
**Table 3-4: All items of the position fields in playout/ingest/transform mode**

Item	Function
	By default these position fields show the elapsed ( <b>DONE</b> ) and remaining ( <b>TODO</b> ) time of the item to be played out, recorded, etc., as well as the current position. You can enter a new position into them, too. Via their context menu with the options <b>Timecode</b> , <b>Frames</b> , <b>Current position</b> , <b>Done</b> and <b>To do</b> you can configure which of the information should be shown in the fields.
	With this list (context menu of the position fields) you can switch the notation of the position and length indicators for the currently activated controls between timecode and frames (see also section "Switching the Notation" on page 2-22).   For more information about timecode/ frame number fields and their format refer to section "About Timecode / Frame Number Fields" on page 2-21.

**Table 3-5: All items of the operation controls in playout/ingest/transform mode**

Item	Function
	If available, you can play out the timeline backwards with this button.
	This button switches on the back-to-back mode for playlists.

	 When switching on the back-to-back mode, the clips in playlists will be played out as single clips and stop at the end of the timeline. You have to press [Space] to proceed.
	If available, you can eject the tape of the externally connected device with this button.
	With this button you can play out the contents of the timeline.
	With this button activated a playout of the timeline will be performed endlessly in a loop.
	<p><i>VENICE controls:</i> This button activates the frames display mode.</p> <p><i>External device controls:</i> This button stops the current operation of the externally connected device.</p>
	If available, these buttons activate the fields display mode or the frames display mode. The buttons are polarizing, meaning that only one can be activated at the same time.
	With these buttons you can step one video field/frame for- or backward in the timeline.
	With these buttons you can jump to particular points on the timeline.
	With these buttons you can jump to the timeline begin or timeline end.
	These buttons initiate a fast backward or forward operation of the external player.
	With the <b>INSERT/ASSEMBLE</b> drop-down list you determine whether data (e.g. on VTRs) should be inserted, overwritten or which data should be sent to the external device (see section “Selecting Essences for Playout” on page 4-62).
	Once the record is set up correctly, you can start it with these buttons. In the crash record mode it starts immediately, and in the autoedit mode it may account for preroll, postroll, etc.
	Once the transforming is set up correctly, you can start it with this button.
	This button appends the autoedit record operation (tape name, inpoint, outpoint, destination, etc.) to the batch list (ingest mode).



**Table 3-6: All items of the position controls in playout/ingest/transform mode**

Item	Function
  	The buttons <b>IN</b> and <b>OUT</b> enable you to set an in-/outpoint directly from the current position (normally shown in the position field). The button <b>DUR</b> enables you to set the duration of the streamed content.
	Whether the inpoint or outpoint should be changed when altering the duration can be set in the VENICE configurations (see "VENICE Administration and Configuration" user guide).
	You can set a particular position/duration in one of the entry fields to the right of the <b>IN</b> , <b>OUT</b> and/or <b>DUR</b> button.
	With the smaller <b>GO</b> buttons you can move to the associated in- or outpoint after having entered a new position in one of the entry fields to the left.
 	These buttons are toggle buttons that mark the respective in-/outpoint or duration for a deletion and resetting to default. When activating it for the duration, the button <b>DUR</b> will be made available.

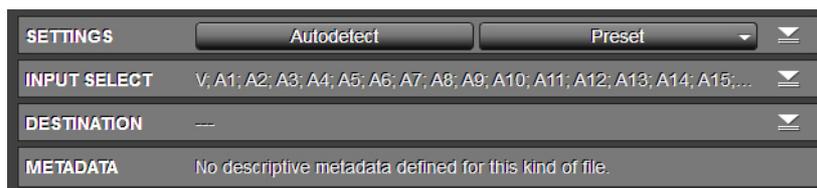


A listing of keyboard shortcuts that can be used for a faster working with the software can be found in section "Keyboard Shortcuts" on page A-2.

For further information about the usage of the operating elements see chapter "Level User" on page 4-1 and chapter "Level Superuser" on page 5-1.

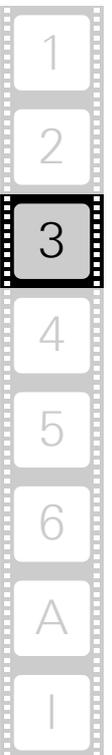
### 3.3.5 Configuration Options

The configuration options allow you to append settings to the ingest, playout and transform operations. All options of the configuration options in their different operation modes are indicated and detailed in the following figures and tables:



*Figure 3-14: Configuration options (collapsed) in ingest mode*

Label	Item(s)
<b>SETTINGS</b>	<p>To the top right of the area you find the buttons <b>AUTO-DETECT</b> (for autodetecting the incoming signal) and the drop-down list <b>Preset</b> (to save a preset or select a previously created one). For further information about this see section "Presets" on page 2-16.</p> <p><i>(press the upper <b>EDIT</b> button to the right)</i></p> <p>In this option you find buttons and lists to determine the <b>Tape name</b>, <b>Input port</b>, <b>Aspect ratio</b>, <b>Input format</b>, configure the <b>Color mode</b>, <b>Color range</b> and <b>Input type</b> of audio. Furthermore you find configuration possibilities for the timecode input like <b>Timecode type</b>, <b>Timecode mode</b> and <b>Start TC</b>.</p> <p><i>(press the lower <b>EDIT</b> button to the right)</i></p> <p>In this option you find lists and settings to determine the <b>Output format</b>, set <b>Auto scale</b>, configure the <b>File format</b>, <b>File type</b>, <b>Codec</b> and <b>Color range</b>. Furthermore you can configure the audio files.</p>
<b>INPUT SELECT</b>	<p>In this option you find the buttons 'Video'  and 'Timecode'  to select the essence (type of material) for the ingest. With the button 'Routing'  you can configure up to 16 audio channels which will then be represented by the peakmeters.</p>
<b>DESTINATION</b>	<p>In this option you find entry fields for content and destination, directory buttons (buttons with three points) for content and destination, and a scale that indicates the state of the disk capacity.</p>
<b>METADATA</b>	<p>In this option you can entry metadata to the audio/video content and get them extended in a separate window.</p>



For further information about the configuration options and its settings in the ingest mode see section "Configuring a Record" on page 5-4.

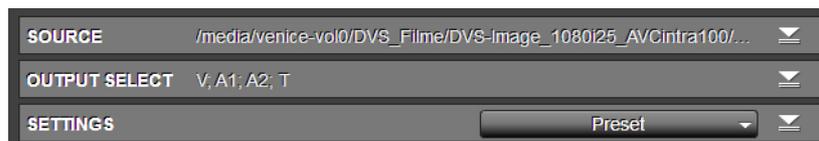


Figure 3-15: Configuration options (collapsed) in playout mode

Label	Item(s)
<b>SOURCE</b>	In this option you find the settings for selecting video/audio content. The buttons <b>APPEND TO LIST, INSERT INTO LIST</b> , directory buttons (buttons with three points) and entry fields are to be found here.
<b>OUTPUT SELECT</b>	In this option you find the buttons 'Video'  , 'Alpha only'  and 'Timecode'  to select the essence (type of material) for the transform. With the button 'Routing'  you can configure up to 16 audio channels which will then be represented by the peakmeters.
<b>SETTINGS</b>	In this option you find lists and settings to determine the <b>Output port</b> , set the <b>Output mode</b> , configure the <b>Output format, Auto scale, Aspect ratio, Color mode</b> and <b>Color range</b> . Furthermore you find configuration possibilities for the timecode.  To the top right you find the drop-down list <b>Preset</b> to save a preset or select a previously created one. For further information about this see section "Presets" on page 2-16.



For further information about the configuration options and its settings in the playout mode see section "Configuring the Output Settings" on page 4-56.

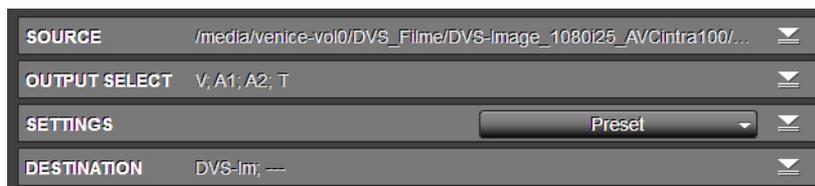


Figure 3-16: Configuration options (collapsed) in transform mode

Label	Item(s)
<b>SOURCE</b>	In this option you find the functions for selecting video/audio content. The buttons <b>APPEND TO LIST, INSERT INTO LIST</b> , directory buttons (buttons with three points) and entry fields are to be found here.
<b>OUTPUT SELECT</b>	In this option you find the buttons 'Video'  , 'Alpha only'  and 'Timecode'  to select the essence (type of material) for the transform. With the button 'Routing'  you can configure up to 16 audio channels which will then be represented by the peakmeters.

Label	Item(s)
<b>SETTINGS</b>	To the top right you find the drop-down list <b>Preset</b> to save a preset or select a previously created one. For further information about this see section "Presets" on page 2-16.  Then you find lists and settings to determine the <b>File format, File type</b> , configure the <b>Codec, Target resolution, Auto scale, Aspect ratio</b> , and <b>Color range</b> . Furthermore you find configuration possibilities for the audio files and the timecode.
<b>DESTINATION</b>	In this option you find entry fields for content and destination, directory buttons (buttons with three points) for content and destination, and a scale that indicates the state of the disk capacity.



For further information about the configuration options and its settings in the transform mode refer to section "Configuration Options" on page 4-70.

The buttons to the right of the configuration options allow you to scroll through the configuration options:



Figure 3-17: Scroll buttons at top and bottom



### 3.3.6 Message and Information Area

All messages and errors are displayed in the message and information area. If a new system message occurs, the color turns red. With a button-click a new window opens and displays all messages in a list. This way, rather annoying pop up messages will not appear.

The information area of the ingest mode is identical to the one of the playout mode. For further information about it please refer to section "Message and Information Area" on page 3-21.

The information area can be found to the left at the bottom of the user interface. It provides status information, for example, about dropped frames and about the external device connected via RS-422:



Figure 3-18: Information area

Error indications, such as missing syncs or dropped frames/audio samples, will be shown there. Missing syncs will be indicated for the video

channel as well as an external device, depending on whether the operating elements for play or record are currently activated. However, an error message about dropped frames, i.e. video or audio data that could not be read from or written to the storage in time, has priority over any other message. You can reset the dropped frames counter via the menu option **Reset dropped frames display** on the **Options** menu (see section “The ‘Options’ Menu” on page 3-5).



Individual frames missing in an image sequence consisting of still images, i.e. image files that are not present on the storage at all, are registered as drops.

To the right of the error messages the slave’s status is displayed, providing you with details about the state of the external player connected to the remote output of the VENICE server. Further information about the different possible states can be found in section “States of an External Device” on page A-10. When no external device is connected, the information area shows *SLAVE STATE: OFFLINE*.



When controlling the video channel from a client, the images in the video overlay are transmitted via network. There may be a time delay until the material is displayed in the video overlay and it may seem as if drops occurred. Real drops on the server, however, will be automatically detected and you will be informed about them in the information area.

## 3.4 The Scrub Bar / Shuttle Bar

Beneath the video overlay you find a bar. Depending on the device selected for the current operation mode (player/recorder), it can provide either a scrub bar or a shuttle bar.

### 3.4.1 The Scrub Bar

The scrub bar will be available when the operating elements of the player are activated (see section “Controlling the Devices (Player (VTR) / VENICE)” on page 4-64) and content is selected for a playout (see section “Selecting Content for Playout” on page 4-57).



Figure 3-19: The scrub bar

The scrub bar provides a timeline of the currently selected content. With its cursor (  ) you can move within and view it. Simply select the cursor with the mouse and move it along the scrub bar to the wanted position. You can also click somewhere on the scrub bar to move the scrub bar cursor there instantly. While working with the scrub bar or

with the operating elements in the player mode (see section “Operating Elements of the Player (Tab VENICE)” on page 4-64), the video overlay will always adjust to your moves on the timeline of the selected content (see section “The Video Overlay” on page 3-14).

The blue line indicates the part of the timeline that is currently selected via in- and outpoint.



When selecting content for, e.g. a playout operation via the directory window, you can use a scrub bar for previewing content when switching to thumbnail view (see section “Previewing Content via the Dialog Window” on page 4-59).

When in- and outpoints are set (e.g. when pressing [I] or [O] at the respective position of the cursor), they will be shown on the scrub bar as well.

### 3.4.2 The Shuttle Bar

The shuttle bar is used to control an externally connected device via RS-422. It will be available when the tab **RECORDER** (external device) in the operation switches is activated (see section “Controlling the Devices (Player (VTR) / VENICE)” on page 4-28) and the external device is set to accept remote control.



Figure 3-20: The shuttle bar

- Use the slider of the shuttle bar to perform fast backward or forward operations.

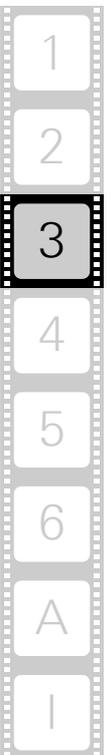
The slider will shuttle back to its zero position when dragged with the mouse and then released.

- Drag the slider to the left or right to move back- or forward in the video material of the external device.

The farther you drag it, the faster the operation will be. While dragging, the slider allows for a continuous setting of the speed in either direction from less than one (slow motion/jog) to a speed of ten times one (fast motion/shuttle).

By turning the scroll wheel of the mouse with the mouse cursor placed over the shuttle bar, the speed can be set without shuttling back to zero. When pressing either the [Shift], [Ctrl] or [Alt] key simultaneously, the slider steps made with the scroll wheel can be adjusted. A click of the mouse on the shuttle bar will shuttle the slider back to zero.

Speed (±)	State	Explanation
0.1 to 1	JOG	slow motion/jog
1 to 10	SHUTTLE	fast motion/shuttle



The VENICE client software will display the respective state of the external player in its information area (see section “Message and Information Area” on page 3-21).

When connected correctly to the VENICE server and with the input format appropriately set, the video overlay will show you the current position of the externally connected device (input signal) and adjust to your moves accordingly (see section “The Scrub Bar / Shuttle Bar” on page 3-22).

The shuttle bar is used to control an externally connected device via RS-422. It will be available when the operating elements of the player (external device) are activated (see section “Operating Elements of the Player (Tab PLAYER)” on page 4-28) and the external device is set to accept remote control. Apart from this the shuttle bar of the ingest mode is identical to the one of the playout mode.

### 3.5 The Tool Area

On the right half of the user interface is the tool area to be found. It provides the audio monitoring tool or the list editors, depending on your requirements. The following sections provide a short overview of the tool area. Further information about the items and features are detailed in section “Switching between the Tools” on page 4-76.

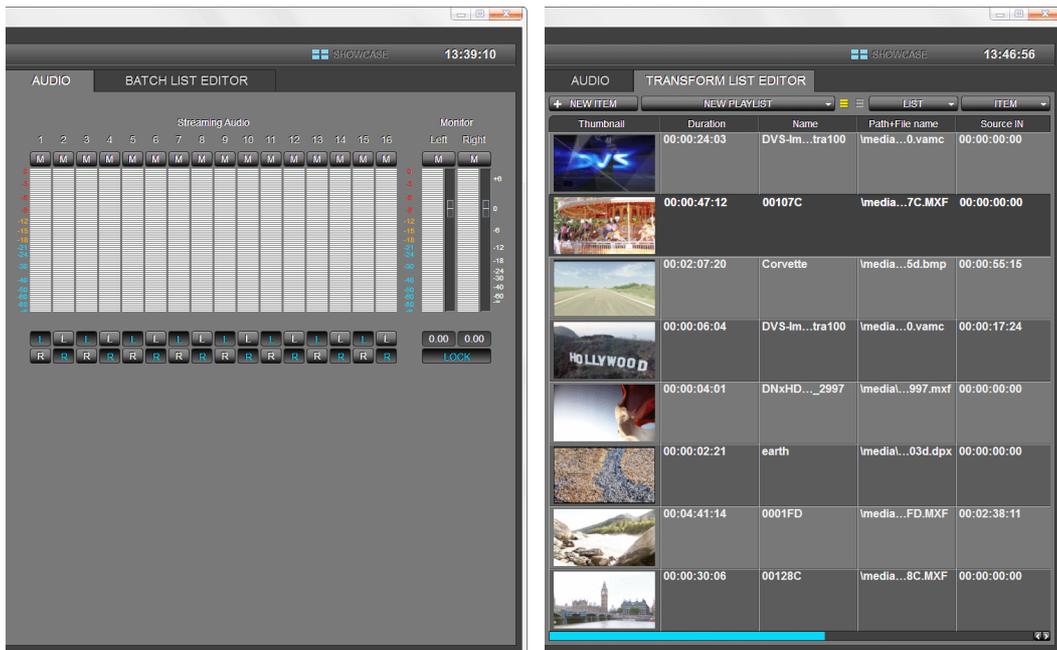


Figure 3-21: The tool area (audio and list editor)

#### 3.5.1 The Audio Monitoring Tool

In VENICE, the audio is streamed via network to the client where the VENICE client software is installed. The audio monitoring tool allows you to adapt the streamed audio that can be heard at your workstation to your liking.



The peakmeters displayed by the VENICE client software show the audio that is streamed via network (MPEG-2). They can serve as a point of reference and should not be used for precision measuring.



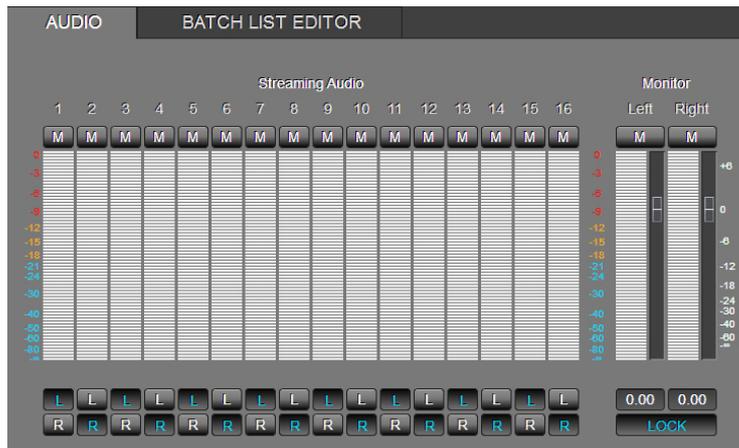


Figure 3-22: The audio monitoring tool

- Select whether you want to have the list editors or the audio monitoring tool displayed by using the 'tool tab' (see section "The List Editors" on page 3-27).



For the options of the audio monitoring tool on the channel group tab apply the descriptions below as well. For further information about the audio monitoring tool in general refer to section "Audio Monitoring" on page 4-86.

In the audio monitoring tool you find the following options to make audio settings in the playback, ingest or transform mode:

Item	Function
	This button mutes a single audio channel.
	This button mutes all left, all right or all channels.
	This slider (vertical in the software) adjusts the volume. The value will be shown in the fields below.
	This button locks both sliders together.
	Left channel of the audio stream.
	Right channel of the audio stream.

The audio channels are represented by the peakmeters. The audio levels are indicated by color and the values to the left and right of the peakmeters.



For further information about the configuration options of the audio monitoring tool refer to section "Audio Monitoring" on page 4-86.

### 3.5.2 The List Editors

With the list editors you can administer and create playlists, transforming lists or batch record lists.

- The **PLAYLIST EDITOR** is available in the playout mode.
- The **TRANSFORM LIST EDITOR** is available in the transform mode.
- The **BATCH LIST EDITOR** is available in the ingest mode (after the batch record mode has been selected, see section "Operating Elements of the Recorder (Tab VENICE)" on page 4-29).



The channel group tab (see section "General Usage of the Channel Group" on page 4-9) only offers a playlist editor. For the options of the drop-down lists on the channel group tab apply the descriptions below as well.

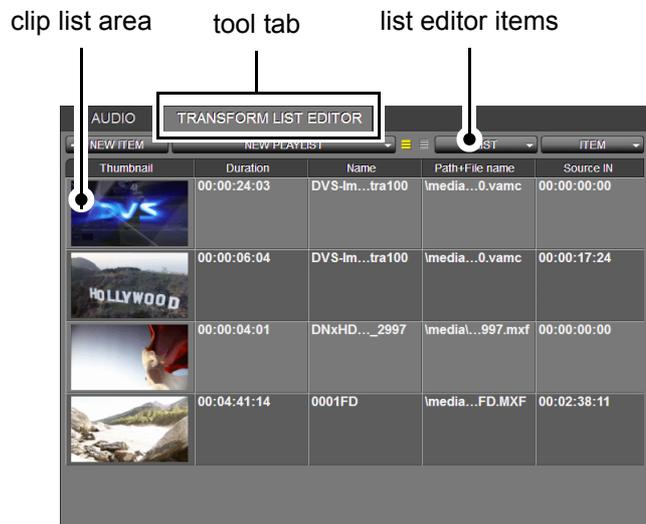


Figure 3-23: The list editor in playout mode

The video/audio content is shown in thumbnails or represented by text, depending on your configurations in the list editor items. All video/audio related information are displayed in the clip list area that can be adjusted to your purposes. At the bottom of the user interface you find a slider to change your position in the clip list when the window size is too small to show all items. All list editor items are indicated and detailed for all operation modes in the following figure and tables:

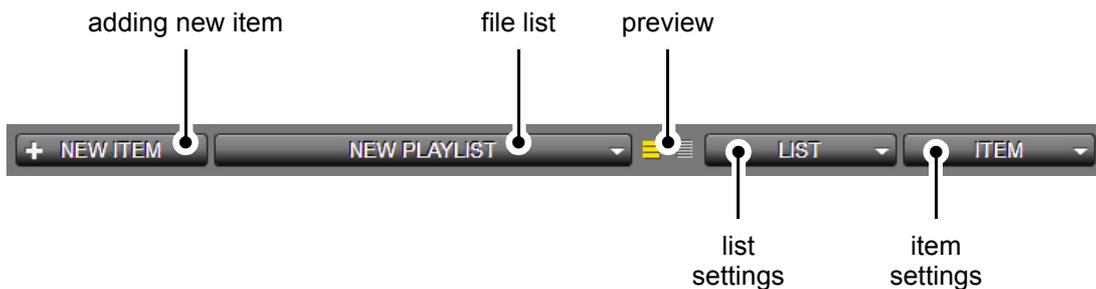
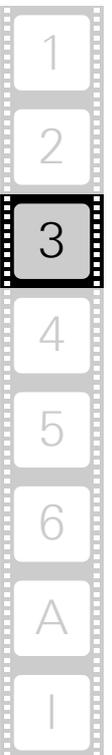


Figure 3-24: The list editor items with its drop-down lists





For further information about the configuration options of the list editors refer to section “The List Editors” on page 4-76.

**Table 3-7: This information is valid for playout/ingest/transform mode**

Label	Item(s)	Description
adding new item	-	When clicking this button, you can add new items to the list. A further window will open up where you can select the respective content.
file list	-	By clicking on this drop-down list your last 10 created/ loaded clip lists will be present for selection.
preview	-	By clicking this buttons you can switch from thumbnail view to text view.

**Table 3-8: This information is valid for ingest mode**

Label	Item(s)	Description
list settings	<b>New...</b>	Starts a new clip list in the default settings of the software.
	<b>Open...</b>	Allows you to select a clip file and open it in the software.
	<b>Save as...</b>	Saves the currently opened clip list under a different name and/or location.
	<b>Rename...</b>	Renames the currently displayed clip list.
	<b>Clear</b>	Clears all items from the clip list.
	<b>Close</b>	Closes the currently displayed clip list.
	<b>Close all</b>	Closes all clip lists and removes them from 'file list' in a single step.

Table 3-9: This information is valid for **playout and transform mode**

Label	Item(s)	Description
list settings	<b>New...</b>	Starts a new clip list in the default settings of the software.
	<b>Open...</b>	Allows you to select a clip file and open it in the software.
	<b>Save as...</b>	Saves the currently opened clip list under a different name and/or location.
	<b>Rename...</b>	Renames the currently displayed clip list.
	<b>Delete...</b>	Deletes the active clip list.
	<b>Delete all...</b>	Deletes all clip lists.

Table 3-10: This information is valid for **playout and transform mode**

Label	Item(s)	Description
item settings	<b>Append...</b>	Opens a directory window to append a clip to the clip list.
	<b>Insert...</b>	Opens a directory window to insert a clip in the clip list.
	<b>Load item into player</b>	Loads the currently selected item into the video overlay.
	<b>Link items</b>	Links separate audio and video clips to a single item.
	<b>Unlink items</b>	Separates a linked item into its video and audio components.
	<b>Select all</b>	Selects all items in the currently displayed clip list.
	<b>Remove selection</b>	Removes a selection.
	<b>Delete</b>	Deletes the currently selected item(s) from the clip list.
	<b>Delete all</b>	Deletes all items from the clip list.



**Table 3-11: This information is valid for ingest mode (batch list)**

<b>Label</b>	<b>Item(s)</b>	<b>Description</b>
item settings	<b>Select all</b>	Selects all items in the currently displayed clip list.
	<b>Deactivate active item</b>	Deactivates the selection marking of an item.
	<b>Slip source timecode...</b>	Allows you to change the source timecode of the selected item.
	<b>Slide source timecode...</b>	Allows you to change the source timecode of the selected item without changing its duration.
	<b>Set to offline</b>	This option sets the selected item to 'OFFLINE' in the clip list.
	<b>Delete</b>	Deletes the currently selected item from the clip list.

## Level User



The 'User' has limited user rights and therefore no access to the software features of the 'Superuser' (see section "User Level Management" on page 2-5 and chapter "Level User" on page 4-1) and 'Administrator' (see chapter "Level Administrator" on page 6-1). Furthermore, the 'User' does not have to log in with a password but can access all features directly when selecting a project or scenario that was created by the 'Superuser'.

When selecting, e.g. a project (see section "Projects" on page 2-18) or a scenario (see section "Scenarios" on page 2-18) the 'User' can carry out ingest, playout or transforming tasks.

Descriptions about how to perform ingest, playout and transforming operations as well as how to form channel groups, work with the tool area or information about AS-11 and the Avid Workflow Option can be found in this chapter.



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## 4.1 Administering the Channels

Once at least one channel is connected (see section “Connecting to a Video Channel” on page 2-11) and the respective project is selected, it can be administered via the channel administration items in the **SHOW-CASE** view (see section “The Channel Administration Items” on page 3-9). In the channel administration items you can, for example, assign a name to each channel or disconnect one:

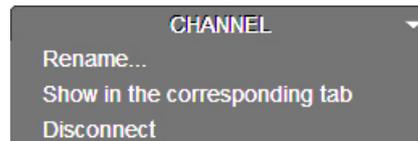


Figure 4-1: Options of the drop-down list CHANNEL

- Select the channel that you want to administer by clicking on its show case.
- Then choose from the **CHANNEL** drop-down list the respective option you want to use for your task (e.g. **Rename...**).

This will open a window with an entry field.

- Type in the channel name in the respective field and click **OK** or press [Enter] on your keyboard.

The name of the video channel in the show case as well as on its corresponding video channel tab will be changed. The name of the channel on the channel connection tab (see section “Connecting to a Video Channel” on page 2-11) will not be changed.



To rename a channel, you can use the option **Rename** of the context menu of the respective video channel tab (see section “The Video Channel Tab” on page 3-11) as well.

Afterwards you can begin working with the video channel.

- For example, switch to its video channel tab by selecting the option **Show in the corresponding tab** in the **CHANNEL** drop-down list or by double-clicking the show case and then choose one of its operation modes (see section “General Usage of the Video Channel Tab” on page 4-14).

If you want to disconnect the channel, select the option **Disconnect** in the drop-down list **CHANNEL** (see section “Disconnecting and Freeing a Video Channel” on page 2-24).



In the **SHOWCASE** view you can also form channel groups to control two or more VENICE channels simultaneously from a single tab. Further information about this and the channel administration tab can be found in section “Channel Groups” on page 4-5.

## 4.2 Channel Groups

In the **SHOWCASE** view (see section “The SHOWCASE View” on page 3-8) you can form a channel group to control two or more VENICE channels simultaneously from a single tab (also called multi-device operation mode). Furthermore, you can administer it and use it for playout or record operations and dissolve it again after having finished your tasks.

### 4.2.1 Notes on the Operation of Channel Groups

This section provides some notes on how to use channel groups:

- All channels should run in the same operation mode.
- The content that is to be played out may be different according to the material that is loaded for each channel.
- For an ingest the destination settings should be set differently for each channel.
- Static settings cannot be communicated to the channels of the group and have to be set for each individually, such as video raster and format, sync source or the essences that should be used for the operation.

### 4.2.2 Forming a Channel Group

A channel group can be set up in the **SHOWCASE** view. To form a channel group, you must be connected to at least two channels (see section “Connecting to a Video Channel” on page 2-11 and section “General Usage of the Video Channel Tab” on page 4-14). The options for this operation can be found in the channel administration items in the **SHOWCASE** view (see section “The SHOWCASE View” on page 3-8 and section “The Channel Administration Items” on page 3-9).

To form a channel group, perform the following:



Before forming a channel group the channels should be configured properly for their tasks (see section “Configuring the Operation Mode” on page 5-3).

It is not possible to form a group of channels that are set in the transform mode. Furthermore, all channels must be in the same operation mode.

- From the drop-down list **GROUP** in the **SHOWCASE** view select the option **New....**

This will display the following dialog window on the screen:



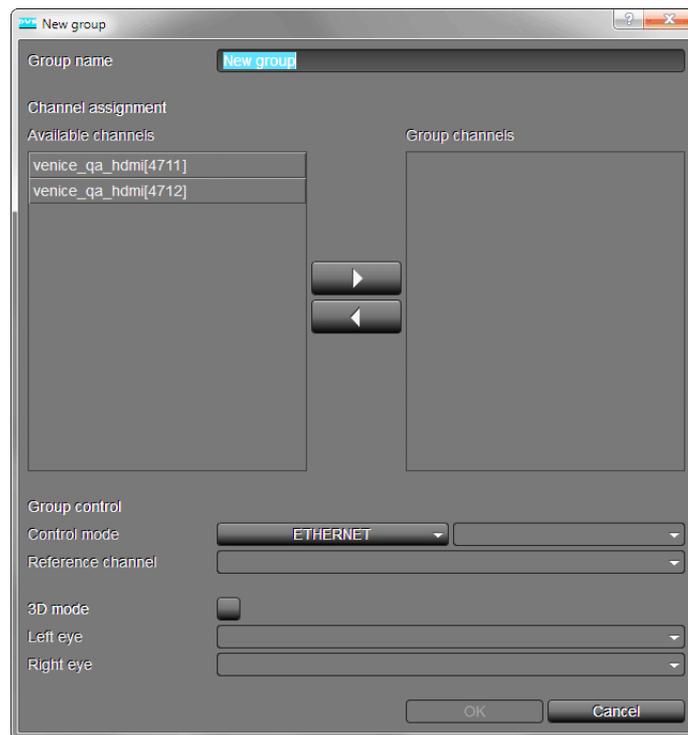


Figure 4-2: Creating a new channel group

- Enter a name for the channel group in the entry field **Group name** on top of the window.
- Select from the list field **Available channels** the channels that should be added to the group. Multi-selection is possible by pressing [Ctrl] and selecting the respective channels simultaneously.
- Transfer them to the list field **Group channels** to the right with the button .
- To remove a channel from the channel group and transfer it back to the list field **Available channels**, select the respective channel(s) by clicking on it (them) and then using the button .
- In the area **Group control** specify the way the channel group should be controlled.

The table below indicates the options that are provided in the **Group control** area:

Table 4-1: Options for the group control

<b>Control mode...</b>	Determines the remote connection between the channels ( <b>Ethernet</b> or <b>RS-422</b> ). If <b>Ethernet</b> is selected, you have to specify the IP address that should be used to interconnect all channels, i.e. the IP address of the system where the reference channel is located. The localhost address <b>127.0.0.1</b> can be used when the channels of the group are located on one VENICE server.
<b>Reference channel</b>	Determines the reference channel which will be used to send the commands to the other channels. Its timeline and configurations are shown on the channel group tab.



If required, you can set a 3D mode by activating the check box to the left of the label **3D mode**. This is described in more detail in section "Setting 3D Mode" on page 4-11.

- Once everything is specified, press the **OK** button.

This will form the channel group and you will receive a new show case representing the channel group in the **SHOWCASE** view:



Figure 4-3: Channel group tab

Additionally, together with the show case a new tab will be displayed in the user interface that can be used to control the channel group (see section "General Usage of the Channel Group" on page 4-9).

The video channels that have been added to the group are now in remote mode. The new formed channel group acts as the master that controls the video channels for simultaneous playout or record operations.



### 4.2.3 Administering a Channel Group

Once a channel group is available in the **SHOWCASE** view, it can be administered in almost the same way as a single channel. For this the drop-down list **GROUP** can be found in the **SHOWCASE** view:



Figure 4-4: Options of the drop-down list GROUP

As soon as the show case of a channel group is selected, the options will be available:

- Select from the **GROUP** drop-down list the respective option you want to use for your task (e.g. **Rename...**).



The option **Rename** as well as the options **Remove...** and **Configuration...** can be invoked via the context menu (right-click) of the channel group tab, too.

This will open a window with an entry field.

- Type in the name and click **OK** or press [Enter] on your keyboard.

The name of the channel group in the show case as well as on its corresponding channel group tab will be changed.

You can modify the channel group by selecting the option **Modify...** This will open the window **Modify group** where you find the list field **Available channels** to add further channels to the group as described in section "Forming a Channel Group" on page 4-5. It is also possible to configure the settings for **Group control** or to set **3D mode** after having formed a channel group. If you want to resolve the channel group, select the option **Remove...** from the drop-down list. The tab of the group as well as the show case of the group in the **SHOWCASE** view will be closed. Afterwards you can use the channels separately again.

## 4.2.4 General Usage of the Channel Group

When a channel group is formed, a further tab will be shown in the VENICE client software. This tab can be used to control the group:



Figure 4-5: Tab to control a channel group

The video channels of the group are in the remote mode which are controlled by the channel group.

The channel group tab shows you, similar to the **SHOWCASE** view, the members of the group in video overlays. Via the slider at the top right of the video overlays its size can be configured (see also section “The Show Case” on page 3-10).

The timeline and configuration options shown in the channel group are the ones of the reference channel. Furthermore, you find, similar to the video channel tab, the operation mode settings and the operating elements (see section “Operation Mode Settings” on page 3-12 and section “Operating Elements” on page 3-15).



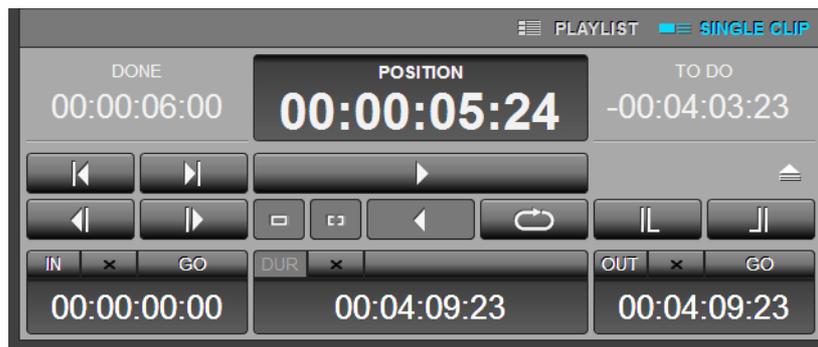
By switching the operation mode (see section “Selecting an Operation Mode” on page 4-14) on the channel group tab you switch the operation mode of all channels in the group.



Switching operation modes on the respective video channel tabs of the group members is not possible.

Then you can use the provided operating elements of the channel group tab to perform playout or record operations same way as described in section “Performing the Operation” on page 4-19:

playout mode:



ingest mode:



Figure 4-6: Operating elements of the channel group

In the playout mode each channel will play out the material that is currently loaded in the individual channel and the channels will follow the positions of the reference channel.

In the ingest mode each channel will record to the destination that has been configured for the individual channel.



For further information about the operating elements see section “Operating Elements” on page 3-15, chapter “Level User” on page 4-1 or chapter “Level Superuser” on page 5-1.

Further information about the setup and configuration of channel groups can be found in chapter “Level Administrator” on page 6-1.

## 4.2.5 Setting 3D Mode

When forming a channel group (see section “Forming a Channel Group” on page 4-5) or administering it (see section “Administering a Channel Group” on page 4-8) the 3D mode can be selected in the appropriate check box. This option allows you to play out video content that has been determined as clip for the right or left eye by a metaclip (see section “Metaclips” on page 2-17) via the VENICE SDI-outputs. It offers you the full feature set of 2D playlists for the 3D channel group.

### Forming a 3D channel group

To form a channel group in 3D mode, perform the following:

- Form a channel group as described in section “Forming a Channel Group” on page 4-5. The stereo content for the video channel should not have been selected yet.

Activate the check box **3D mode** in the **New group** dialog window or in the **Modify group** dialog window (see section “Administering a Channel Group” on page 4-8) and define the channels for the left and the right eye by selecting them in the respective drop-down lists as shown below:



The channels for the left and right eye should be set according to the signal inputs at the monitor that have been defined as left and right.



Figure 4-7: Setting the 3D mode

- Press the button **OK**.

This will form the channel group in 3D mode or set the 3D mode for the channel group, depending on the dialog window. To set the operation mode and select the video content for the 3D payout, perform the following:

- Go to the respective channel group tab of the 3D group (see section “General Usage of the Channel Group” on page 4-9).
- Set **PLAYOUT MODE** as the operation mode as described in section “Selecting an Operation Mode” on page 4-14 for the channel group.

This will set both video channels of the 3D channel group in the payout mode, if this has not been set previously.



## Selecting content via Spycer

The VENICE client software recognizes stereo material from a P2 storage device. Selecting content is possible after having ingested the material in Spycer. Load your stereo content into Spycer by performing the following:

- Start the Spycer application (see the “Spycer” user guide).
- Select in the menu **Options** the menu option **Configuration....**

The **Configuration** window will appear on the screen.

- Select the group **Ingest Folders** and activate the check box **P2 Ingest**. To confirm press the button **OK**.

In the network/system drop-down lists of Spycer, to the bottom left of the user interface, the directory tree will be extended by the folder ‘P2 Ingest’. Spycer will recognize the clips as a single clip with stereo content and create a metaclip automatically.



For further information about the creation of metaclips in Spycer see the “Spycer” user guide.

- Select the metaclip for the VENICE client software via Spycer as described in section “Selecting Content for Playout” on page 4-57 or
- return to the VENICE client software and select from the tool area the option **PLAYLIST EDITOR** (see section “The List Editors” on page 3-27).
- Now click the button **ADD ITEMS** to select your stereo clip.

This will open a directory window where you can select the video content. The ‘P2 Ingest’ folder from Spycer will be displayed in the directory tree of the network/system drop-down lists in the VENICE directory window as well.

- Double-click the 3D metaclip you want to use for the playout operation

This will load the clip to the clip list for selection.

- Double-click the clip in the clip list to append it to the video overlays.



Loading the content can also be performed by using a drag ‘n’ drop operation from Spycer to the VENICE video overlay as described in section “Selecting Content for Playout” on page 4-57.

The stereo video content will be assigned automatically to the pre-defined video channels in the correct order, for the right and the left eye. Now you can start your operation by using the operating elements of the channel group tab (see section “Operating Elements” on

page 3-15) after having made the configurations according to your purposes.



It is also possible to append single clips to the video channels and form a group in 3D mode afterwards. For this, you need to know which clip file is intended for the left and the right eye. Then you can configure the video channels for the left and right eye according to the monitor input. Afterwards form a 3D channel group as described in section “Setting 3D Mode” on page 4-11 and play out the content in the channel group tab.

#### 4.2.6 Resolving a Channel Group

When the group is no longer needed, the channels of the group have to be separated again by dissolving the group. To dissolve a group, perform one of the following:

- Close the VENICE client software (see section “Exiting the Program” on page 2-25) or
- use the option **Remove** in the **File** menu (see section “The ‘File’ Menu” on page 3-3) when on the channel group tab or
- use the option **Remove** in the context menu of a channel group tab or
- use the option **Remove** in the **GROUP** drop-down list in **SHOW-CASE** view (see section “Administering a Channel Group” on page 4-8) after having selected the respective channel group.



In addition you can dissolve a group by disconnecting one of its channels (see section “Disconnecting and Freeing a Video Channel” on page 2-24).

Then the group is separated and the channel group tab will disappear. Afterwards, the channels of the group can be used individually again.



## 4.3 General Usage of the Video Channel Tab

Once the tab of a connected video channel has been selected (see section “The Video Channel Tab” on page 3-11), the controls for this channel are displayed. The following list indicates how to use the main part (left half) of the tab of a video channel in general:

1. Selecting an operation mode.
2. Audio output/input select.
3. Audio routing.
4. Remote mode.
5. Performing the operation.
6. Locking the user interface.

All steps are explained in more detail in the following sections.



Video channel tabs can be preconfigured for certain tasks via e.g. project files or presets. Then it may not be necessary to perform all the steps described in the following (see section “Preconfiguring the VENICE Client Software” on page 5-3 and section “Configuration” on page 5-15). This has to be made by the ‘Superuser’.

### 4.3.1 Selecting an Operation Mode

After selecting the tab of a video channel you can switch between the different operation modes for this channel (see section “Operation Mode Settings” on page 3-12):



Figure 4-8: Selecting the operation mode

- Select the wanted operation mode by clicking the respective mode button. You can choose between ingest mode, playout mode and transform mode.

When playout mode or ingest mode has been selected, the VENICE server assumes the role of either the player or the recorder. Switching between these functions can be performed via the operation switches of the operating elements (see section “Operating Elements” on page 3-15). The opposing role can be performed by a connected external device:

Operation Mode	Role of VENICE	Role of External Device
playout mode	player	recorder
ingest mode	recorder	player

In the transform mode you can convert video and audio material to different file formats. If possible, the file conversion will be performed in hardware at a faster render speed.

After the operation mode has been selected, it has to be configured properly for the wanted task.

### 4.3.2 Audio Output/Input Select

In the VENICE client software you have the possibility to activate or deactivate audio channels directly in the option **INPUT SELECT** or **OUTPUT SELECT** (see section “Configuration Options” on page 3-18), depending on the operation mode. To activate or deactivate the audio channels, you simply have to click the respective audio channel buttons, before performing the operation.

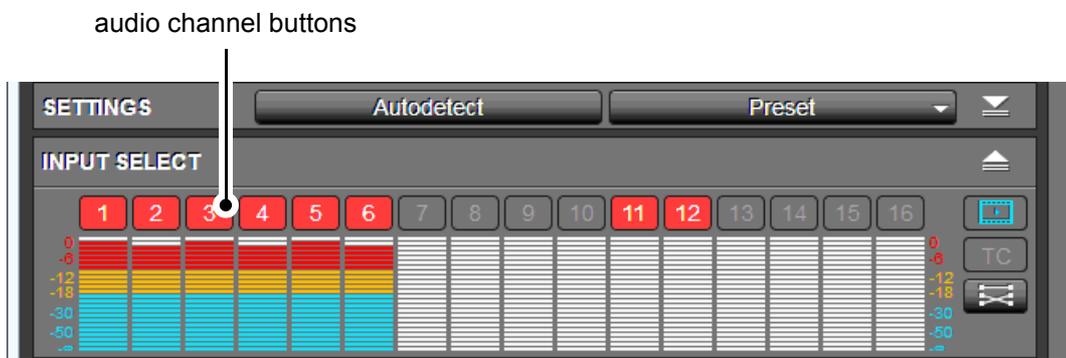


Figure 4-9: The audio input select options in ingest mode

Depending on the operation mode, the activated audio buttons will change color to red (ingest mode), blue (playout mode) and yellow (transform mode) when performing the operation.



If you want to activate/deactivate a not configured audio channel, a system message will be displayed in the message and information area (see section “Message and Information Area” on page 3-21) prompting you to configure the audio channels in the audio routing window (see section “Audio Routing” on page 4-16).

### 4.3.3 Audio Routing

In the configuration options (see section “Configuration Options” on page 3-18), more precisely in the **OUTPUT SELECT** settings, you find all options to append settings to the playout, ingest and transform operations. Among others, you find the routing button  that allows you to modify the incoming or outgoing audio streams which are then represented by the peakmeters. To enable this option, an audio clip has to be appended to the video channel first (see section “Selecting Content for Playout” on page 4-57). After clicking the routing button the audio routing window appears that provides the following functions in all operation modes:

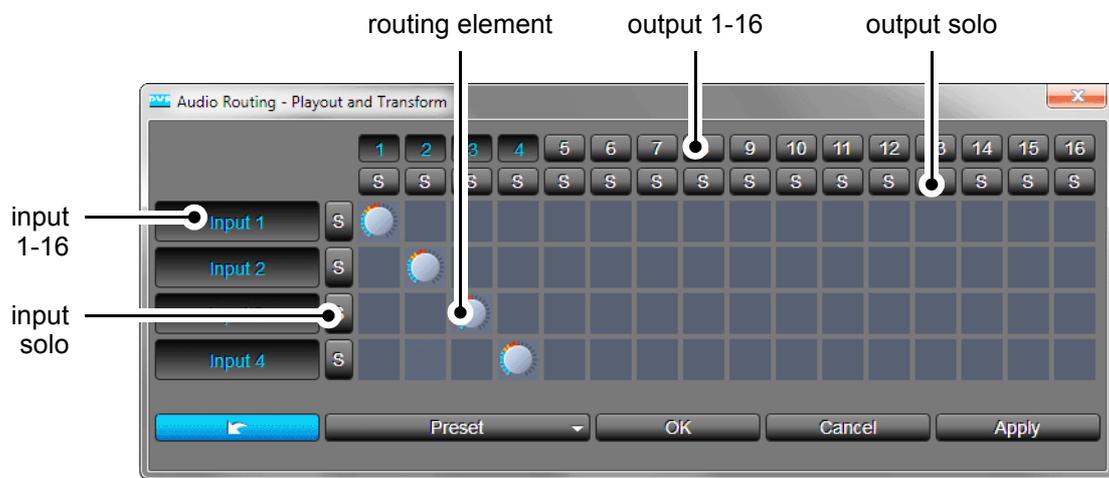


Figure 4-10: The audio routing window

Label	Item(s)
Input solo	When activated, this button mutes all other audio channels in the row but the selected one.
Input 1-16	Input audio channels 1-16.
Routing element	After selecting the routing element the volume can be adjusted with the mouse wheel.
Output 1-16	Output audio channels 1-16.
Output solo	When activated, this button mutes all other audio channels in the column but the selected one.

The buttons and drop-down list at the bottom of the audio routing window contain the following:

Label	Item(s)	Description
	-	Sets the current layout and configurations back to the settings that were stored as defaults.

Label	Item(s)	Description
<b>Preset</b>	Load...	Allows you to select a preset file and open it in the software.
	Save...	Saves the currently opened audio settings as a preset.
	Clear recent files list	Clears/Deletes all presets from the drop-down list <b>Preset</b> .
<b>OK</b>	-	Confirms your settings.
<b>CANCEL</b>	-	Closes the audio routing window (without applying the settings if not applied before).
<b>APPLY</b>	-	Applies your settings to the option <b>INPUT/OUTPUT SELECT</b> in the configuration options.



In the ingest mode all 16 input and output channels will be displayed in the raster. In the modes playout and transform the respective input channels of the clip will be displayed and 16 output channels will be available for configuration.

### Usage of the Audio Routing

The main usage of the audio routing is to adjust the audio signal to your requirements. To e.g. append audio settings to your clip and save them as a preset file, perform the following:

- After having added the audio clip to the video channel (see section “Audio Routing” on page 4-16) click the routing button  in the option **INPUT SELECT** or **OUTPUT SELECT** (depending on the operation mode) in the configuration options (see section “Configuration Options” on page 3-18).



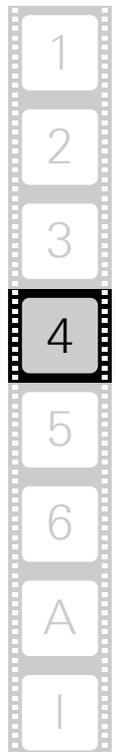
Please note that when in playout mode audio routing is only possible when **SINGLE CLIP** has been selected in the respective drop-down list in the operation switches of the operating elements (see section “Operating Elements” on page 3-15).

The audio routing window appears on the screen where you can adjust the audio stream. The display always shows the audio channels of the clip in the form of the routing elements. Not all audio channels carry data, but all will be displayed and configurable.

- To enable the routing element of a certain audio channel, simply click on the round routing element.

The routing element will turn blue and show its set volume in dB.

- Now you can adjust the volume from silent up to +6 dB with your mouse wheel. The default setting is 0 dB. When pressing [Shift] and



simultaneously turning the mouse wheel, finer adjustments in 0.1 dB steps are possible.

- To e.g. change over stereo channels, simply delete the wrong audio channel by putting your mouse cursor over the routing element and pressing the right mouse button.

This will delete the routing element and you can put another one on the correct audio channel by clicking in the respective field with the left mouse button.

- To reset the settings of a routing element, simply double-click it.
- To mute one or all audio channel(s) in a column, press the output button with the respective audio channel number.
- To mute one or all audio channel(s) in a row, press the input button with the respective audio channel number.
- To silent all other audio channels but the required one, press the 'input solo' or 'output solo' button of the respective channel number.

If the configurations are set according to your purposes, you can store these settings as a preset. To do this, perform the following:

- Click on the drop-down list **Preset** and select the option **Save....**

This will open a directory window where you can select the folder you want to save your preset to.

- Type the name of the preset in the **File name:** entry field and select the directory you want to save it to.

In the **Files of type:** drop-down list the audio routing preset file (file extension *\*.arcpreset*) should be selected.

- To confirm click the button **SAVE**.

For an easier and faster working with the routing elements it is possible to use keyboard shortcuts, too. Multi-selection is possible by pressing [Ctrl] and simultaneously selecting the respective routing elements. Selecting all routing elements is possible by clicking on one element and then pressing [Ctrl + A]. This makes the configuration of more routing elements at the same time possible.

### 4.3.4 Remote Mode

A video channel usually operates as a master. Nevertheless, in the play-out and ingest mode (see section "Selecting an Operation Mode" on page 4-14) it can be controlled via remote as well. Then the video channel can be controlled by an external device, if the hardware is connected and configured properly.

With the drop-down list to the left of the remote button (**RMT**) you can select the protocol that should be used to control the video channel in remote mode (see section "Operation Mode Settings" on page 3-12).

You can select between **RS-422** (9-pin RS-422), **VDCP** (RS-422) or **MOS** (Ethernet).

- Activate the remote mode by pressing the remote button



to the top right of the video overlay.

Afterwards the remote button changes its appearance to its active state and will be labelled in blue font. Then, commands for record, play, stop, jog, or shuttle (MOS: receiving a playlist and updates of the playlist) can be sent to the VENICE server and will be carried out by the video channel depending on the selected operation mode.

If one of the RS-422 protocols has been selected, the controlled video channel will behave like a VTR using preroll, postroll, etc. The specifications of these parameters can be found in section “RS-422 Control” on page A-9.

Normally, when in remote mode, the video channel will be controlled by the master. However, with the remote mode activated, several controls for the video channel will still be available in the user interface. They can be used for a direct control of the video channel without deactivating the remote mode.



With MOS selected VENICE can receive a playlist as well as updates of the playlist. To play it out, you have to use the VENICE client software with the remote mode activated. Currently the software supports MOS in its version 2.8.4. profiles 0 and 2.

To deactivate the remote mode, press the button **RMT** again. Afterwards the remote button changes its appearance to its deactivated state and it will be labelled in white font.

How the remote mode has to be set up in the different operation modes is described in section “How to Perform a Remote Mode Record” on page 4-35 and section “How to Perform a Playout in Remote Mode” on page 4-66.

### 4.3.5 Performing the Operation

With the operation controls in the operating elements (see section “Operating Elements” on page 3-15) you can start the wanted operation. In the playout or ingest mode the video channel of the VENICE server and an externally connected device can be controlled, each according to its role determined by the chosen operation mode (see section “Configuring the Operation Mode” on page 5-3). The device that should be controlled can be selected with the tabs of the operation switches (see section “Operating Elements” on page 3-15):



ingest mode:

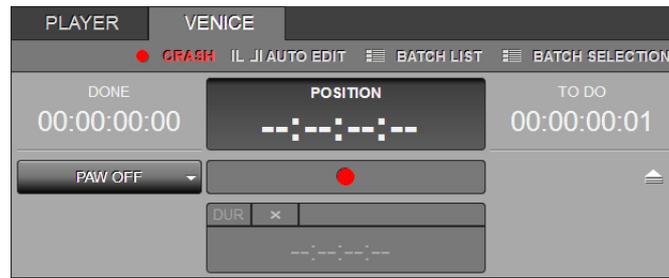


Figure 4-11: Operating elements in ingest mode

layout mode:

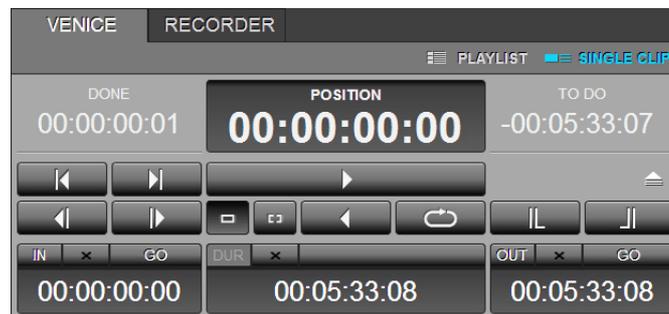


Figure 4-12: Operating elements in layout mode

transform mode:

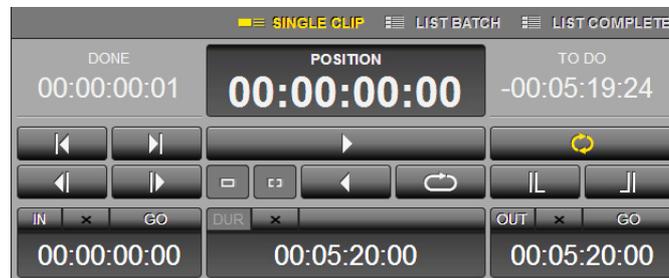


Figure 4-13: Operating elements in transform mode

- Set up the operation by, for example, determining in- and outpoints for the operation.
- Then start the wanted operation. Further information about all this can be found in section "Recording with the VENICE Server" on page 4-22, section "Playing Out with the VENICE Server" on page 4-56 or section "Performing the Transforming Operation" on page 4-72.

Once the operation is completed and your task is finished, you can stop your work with the VENICE server at any time. For this you have to disconnect and free the video channel so that others can use it for their work. This is described in section "Disconnecting and Freeing a Video Channel" on page 2-24.

### 4.3.6 Locking the User Interface

To make sure that the currently running task does not accidentally get interrupted, you can lock the user interface of the software. For this select the option **Lock/Unlock GUI** in the menu **Options** (see section “The ‘Options’ Menu” on page 3-5) or press [Ctrl + L] on your keyboard as well. The items of the user interface will be dimmed and unavailable, and the connected video channel will continue with the task that was initiated previously.

To unlock the user interface again, simply select the same menu option again or press [Ctrl + L].



## 4.4 Recording with the VENICE Server

In the ingest mode (see section “Selecting an Operation Mode” on page 4-14) you can perform record operations with the VENICE server:

- You can control an externally connected device via RS-422, for example, to verify its position, set edit points or view its material.
- You can perform a crash record with the VENICE server.
- You can perform an autoedit record with RS-422 control of the externally connected player.
- You can set the ingest mode into remote mode to control a record on the VENICE server from an externally connected device.
- You can perform a batch list record.
- You can read material while it is still being recorded and play it out on another channel.

All these procedures are explained in this section.



When controlling the video channel from a client, the images in the video overlay are transmitted via network. There may be a time delay until the material is displayed in the video overlay and it may seem as if drops occurred. Real drops on the server, however, will be automatically detected and you will be informed about them in the message and information area (see section “Message and Information Area” on page 3-21).

VENICE does not support direct EE (Electronics Electronics) mode.

### 4.4.1 Configuring a Record

Before you can start recording with the VENICE server, a record operation has to be set up first. To e.g. configure the incoming signal and the outgoing file formats, you have to make input and output settings in the menu **SETTINGS** of the configuration options (see section “Configuration Options” on page 3-18). This has to be made by the ‘Super-user’ and the ‘User’ will select the preconfigured file in the VENICE client software for the record operation. How to preconfigure the VENICE client software for record operations is described in section “Configuring a Record” on page 5-4. How to perform a record operation is described in the following sections.

## 4.4.2 Selecting Essences for Record

With the **INPUT SELECT** option (see section “Configuration Options” on page 3-18) of the ingest mode you have to select the essences (type of material) that you want to capture. You can choose whether you want to record audio or video alone, both together or configure the audio stream:

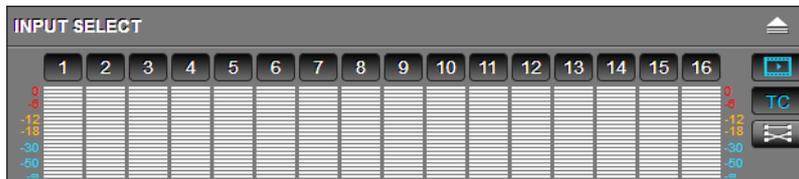


Figure 4-14: The input select option (expanded)

When the **INPUT SELECT** option is collapsed, the currently selected essences will be shown in abbreviated form to the right: **T** for timecode, **V** for video and **A<x>** for the selected audio channels.

The software may automatically activate/deactivate essences so that they match the current configurations, for example, when the video input format is switched manually (see section “Configuring the Input Settings” on page 5-4) or another file format is selected (see section “Configuring the Output Settings (File Settings)” on page 5-6).

With the **INPUT SELECT** option choose the essences according to your needs. By activating or deactivating one of the provided buttons you can determine the essence that you want to capture. For example, if you want to capture only video, the button ‘Video’  must be activated while the other buttons must be deactivated.

The audio channel buttons above the audio peakmeters represent the 16 audio channels that are provided by the VENICE server. If, for example, channels 1 and 2 are selected (if configured in the audio routing), the audio signals that are available at these channels of the VENICE server will be captured.



Further information about audio and the way it is handled can be found in section “About Source Timecode” on page 2-23, in section “Audio Routing” on page 4-16 or in section “Audio Monitoring” on page 4-86.

Currently the ‘Timecode’ button  provides no functionality.

The button ‘Routing’  can be used to configure the audio channels provided by the audio clip.



### 4.4.3 Selecting the Storage Location and File Name

Before performing a record you have to determine the name of the captured file(s) and where to save them in the option **DESTINATION** (see section “Configuration Options” on page 3-18):

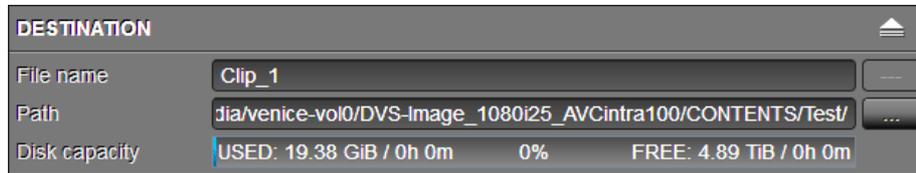


Figure 4-15: The destination option (expanded)

The file name has to be entered manually, but there are several ways to set a record path:

7. You can enter the respective path manually.
8. You can select a path via a dialog window.
9. You can drag ‘n’ drop a path from one of the browsing panes of Spycer.

All these procedures will be explained in this section.



You can also capture a batch list. For this its record has to be set via the controls (see section “Operating Elements of the Recorder (Tab VENICE)” on page 4-29) and the list has to be set up or loaded in the batch list editor (see section “The List Editors” on page 4-76).

After a record operation the metaclip/batch list of the recorded content will be automatically set for a playout (see chapter “Level User” on page 4-1). With this you can review the captured material immediately after a record.

Once a path has been selected, the **Disk capacity** field shows you graphically the amount of disk space that is currently used/free on the entered storage (bar and percentage value). The time values of the used and free disk space depend on the currently configured input settings (video raster).

#### Entering a File Name and Path Manually

You can enter the file name and path for a record manually with the entry fields of the **DESTINATION** option. Just start to enter something in the entry fields and another dialog window will be opened where you can type in the respective file name or path:

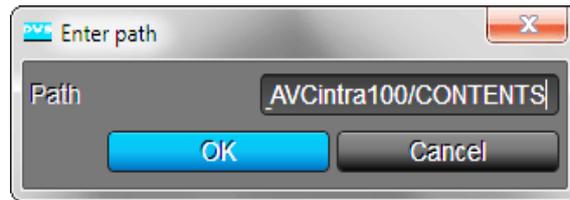


Figure 4-16: Entering a file name or path

In this window enter the file name or path for the record on the VENICE server and confirm your entry with the **OK** button. Perform this for the file name and path separately with the available entry fields.



The path must lead to the storage of the VENICE server you are currently connected to (it can be a connected SAN system as well), and it must be entered as if you were operating on the server locally.

When entering a file name for the record, you just have to enter the prefix without any numbering or file extension. These will be provided by the software automatically. If a file name is not specified, the default name *NewClip* will be given to the recorded clip.



The software arranges the clips numerically, meaning the recorded clips will carry a consecutive number which will be added to the file name in a certain way (see section “The Captured Files” on page 4-27). To the right of the field **File name** is another field that shows you the number that will be used for the next record. As a standard for every new file name the numbering starts with 000/--- meaning that no numbering will be added (the number will be added though when more clips with the same name are recorded). After a record operation the consecutive number is automatically increased by one which ensures that a once captured clip will not be overwritten if the file name remains unaltered.

When entering a path together with a directory that does not exist, it will be created when clicking the **OK** button.

### Selecting a Path Via a Dialog Window

For the selection of a record path you can use the button to the right of the entry field **Path** of the **DESTINATION** option ( ). It will open a dialog window similar to a browsing pane in Spycer.



This window is generated by Spycer. Without a Spycer application installed it will not be available.

Browse in the directory tree of this window to the directory where the recorded files should be stored. You may also create a new directory via the provided buttons of this window.

Once a directory has been selected, confirm it with the **OK** button. Afterwards the path will be displayed in the respective entry field of the **DESTINATION** option. For any further information about this window



see section “Selecting Content via a Dialog Window” on page 4-58 as well as the “Spycer” user guide.

### Selecting a Path Via Spycer

You can drag ‘n’ drop the path for a record directly from a browsing pane of Spycer to the user interface of the VENICE client software.

In one of the available browsing panes select from one of the network/system drop-down lists the VENICE server you are currently connected to and browse in the directory tree to the directory where the recorded files should be stored. Then take this directory and drag ‘n’ drop it anywhere on the user interface of the VENICE client software.

Afterwards the path will be displayed in the respective entry field of the **DESTINATION** option. For any further information about this see section “Selecting Content Via Spycer” on page 4-60.



The directory must be located on the storage of the VENICE server you are currently connected to.

Further explanations of Spycer and its usage can be found in the “Spycer” user guide.

## 4.4.4 Entering Metadata

The configuration option **METADATA** (see section “Configuration Options” on page 3-18) are available e.g. for the Avid workflow, P2 and XDCAM data:

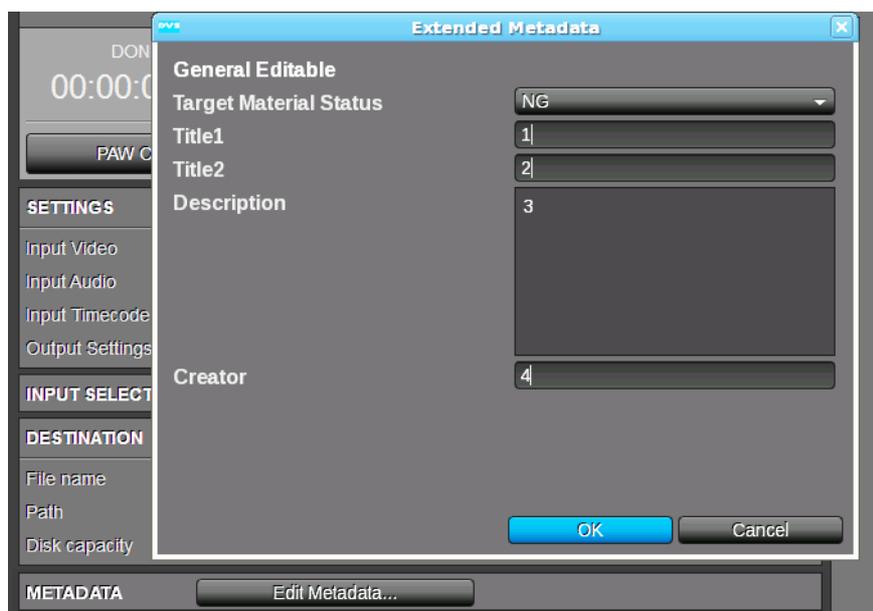


Figure 4-17: The metadata option (expanded)

## 4.4.5 The Captured Files

The video and audio data captured during a record will be stored at the location set with the **DESTINATION** option (see section “Selecting the Storage Location and File Name” on page 4-24).

For the generated items one metaclip will be created (see section “Metaclips” on page 2-17) directly at the selected location.

The names for the created items will take the field **File name** of the **DESTINATION** option as the prefix. Behind this, in case of further records with the same file name, the consecutive number will be added.

When recording with VENICE this would lead to the following generated items:

### Container Formats

Metaclip:	<i>&lt;prefix&gt;&lt;consecutiveNo&gt;.vamc</i>
Data subfolder:	–
Container file:	<i>&lt;prefix&gt;&lt;consecutiveNo&gt;.&lt;ext&gt;</i>

Most container files will be stored at the selected location directly. However, if several files are generated they may get sorted into a subfolder with the name *<prefix><consecutiveNo>*. If a P2 format has been selected, the P2 data structure will be observed.

With container file formats audio and video are normally recorded both in the same file. But in case audio is created in separate files, they will carry the following names:

Audio files (container format):	<i>&lt;prefix&gt;&lt;consecutiveNo&gt;A&lt;channelNo&gt;.&lt;ext&gt;</i>
---------------------------------	--

In case you have selected an audio-only file format for audio, the files will be named as detailed under ‘Still Image Formats’.

### Still Image Formats

Metaclip:	<i>&lt;prefix&gt;&lt;consecutiveNo&gt;.vamc</i>
Data subfolder:	<i>&lt;prefix&gt;&lt;consecutiveNo&gt;</i>

The file names of still image formats will be followed by an underscore and an increasing 7-digit number for the individual image files (file/frame number):

Still image files:	<i>&lt;prefix&gt;&lt;consecutiveNo&gt;_&lt;file/frameNo.&gt;.&lt;ext&gt;</i>
--------------------	--



If audio is recorded as well, the audio files will provide the same file name but without the frame numbering. Instead, for mono files the channel number will be added:

Audio files (multi-channel):	<prefix><consecutiveNo>.<ext>
Audio files (mono):	<prefix><consecutiveNo>_<channel-No>.<ext>

## 4.5 Controlling the Devices (Player (VTR) / VENICE)

In the ingest mode the VENICE server assumes the role of the recorder while the external device is used as a player (see also section “Selecting an Operation Mode” on page 4-14). Via the operation switches at the top of the operating elements you can switch between the operating elements of the VENICE server and the operating elements of the player (see section “Operating Elements” on page 3-15).

This section describes the controls available for the devices in detail. First the operating elements of the player are explained (tab **PLAYER**) and after that the operating elements of the recorder (tab **VENICE**).

### 4.5.1 Operating Elements of the Player (Tab PLAYER)

With the tab **PLAYER** in the ingest mode activated the operating elements of the player are displayed. The operating elements can then be used to move within or manually play out the material of the external device, for example, to set up its playout position. Additionally, you can set an in- and/or outpoint for the material.



Figure 4-18: Operating elements of the player

You can use the items of the operating elements as described in section “Operating Elements” on page 3-15. The button **APPEND TO LIST** in the operation controls is available when the batch record mode (see

section "Recording a Batch" on page 4-36) is selected. It appends the currently configured autoedit record operation (tape name, inpoint, outpoint, destination, etc.) to the batch list (see also section "Adding Items to a List" on page 4-78).

The timeline that is controlled is the content of the external device, such as the tape of a VTR.

## 4.5.2 Operating Elements of the Recorder (Tab VENICE)

When the tab **VENICE** is activated in the ingest mode, the operating elements of the recorder are displayed. They can then be used to start a record operation with the VENICE server.

A record can be performed in different modes which can be set via the operation switches at the top left of the operating elements:

- The crash record mode allows you to start a record operation on the VENICE server at any time. With the record button you can start a record and by clicking it again you can terminate it. To continue the record, you have to click the record button again whereas a new file will be created.



Figure 4-19: The operating elements in the crash record mode

- The autoedit mode enables you to frame-accurately play out with the externally connected device and record this with the VENICE server.



Figure 4-20: The operating elements in the autoedit mode



- In the batch record mode you can use a batch list to perform several autoedit capture operations in a single step. With the operation switch **BATCH LIST** you can specify that a complete batch list should be recorded.



Figure 4-21: The operating elements in the batch list mode

- In the batch selection mode you can use a batch list to perform several autoedit capture operations in a single step. With the operation switch **BATCH SELECTION** you can specify that the currently selected items of a batch list should be recorded only.



Figure 4-22: The operating elements in the batch selection mode



Further information about lists and how to use them can be found in section “The List Editors” on page 4-76.

For further information about the operating elements see section “Operating Elements” on page 3-15.

### 4.5.3 How to Control the External Device

For a record operation you may want to control an external device connected via RS-422 with the VENICE client software, for example, to verify its position, set edit points or view (play out) its material. To do this, perform the following:



The systems you are working on operate with voltages that can be hazardous to your health. Never work on the systems or access their interior with the power cable(s) being plugged in. Do not reach into any parts of the systems. Make sure the power supply is disconnected from the components you intend to work on.



For this procedure the external device has to be connected correctly to the VENICE server (video, audio, timecode, and RS-422). Additionally, the device has to be set to accept remote control.

Video channel tabs can be preconfigured for certain tasks via e.g. project files or presets. Then it may not be necessary to perform all the configurations described below (see section “Preconfiguring the VENICE Client Software” on page 5-3). This has to be made by the ‘Superuser’.

- If not already activated, switch the operating elements to the player mode by selecting the tab **PLAYER** (see section “Controlling the Devices (Player (VTR) / VENICE)” on page 4-28).
- Use the operating elements and the video overlay to search for a certain position or to play out the material of the externally connected device.

With this the external device can be controlled and you can, for example, verify the material. However, for an autoedit record with the VENICE server an in- and outpoint should be set as well, which will be explained next:

- Use the operating elements and the video overlay to search for the exact position for the inpoint in the material of the externally connected device.
- Press the **IN** button to set the inpoint to this position. Alternatively, you can enter the respective position manually in the entry field of the inpoint and afterwards press [Enter].
- After that use the controls to move to the wanted outpoint in the material.
- Click the button **OUT** or enter the position in the respective entry field of the outpoint and afterwards press [Enter].

With this the selected in- and outpoint will be shown in the associated entry fields of the operating elements and the duration will be set accordingly.



Alternatively, you may also specify one of the entries for in- or outpoint and afterwards set the duration of the playout.

When this is finished you can, for example, start an autoedit record as described in section “How to Autoedit Record with the VENICE Server” on page 4-33.



## 4.5.4 How to Crash Record with the VENICE Server

In the ingest mode you can perform a crash record with the VENICE server. It will then immediately record, according to your settings, the signal that is present at its input, e.g. the content that is played out manually with an external device (see section “How to Control the External Device” on page 4-30).

To initiate a crash record, perform the steps as described below:



Some settings may not be available for the user level ‘User’. In this case you will have to log in as ‘Superuser’ or ‘Administrator’.

- If necessary, configure the input format so that it matches the signal present at the server’s input with the **SETTINGS** option (see section “Configuring the Input Settings” on page 5-4) as ‘Superuser’.
- Determine a file name and path for the file(s) to be recorded with the **DESTINATION** option as described in section “Selecting the Storage Location and File Name” on page 4-24.
- If necessary, specify the essences that you want to record with the **INPUT SELECT** option (see section “Selecting Essences for Record” on page 4-23).
- If necessary, set up the file format(s) of the file(s) to be recorded via the **SETTINGS** option (see section “Configuring the Output Settings (File Settings)” on page 5-6) as ‘Superuser’.
- In case you want to record on Avid’s ISIS or Interplay (file format MXF (for ISIS & Interplay)), you can specify metadata for the recorded files with the **METADATA** option (see also section “Avid Workflow” on page 4-52).
- Then, if not already activated, switch the operating elements to the record mode by selecting the tab **VENICE** (see section “Controlling the Devices (Player (VTR) / VENICE)” on page 4-28).
- Make sure that the crash record mode is selected (see section “Operating Elements of the Recorder (Tab VENICE)” on page 4-29).
- If wanted, type in the duration that the record should last in the **DUR** field.
- Afterwards press the record button () of the operation controls.

The VENICE server will then start the record and as an indication for this the characters of the greater position field turn red. The video overlay will show you what is present at the server’s input. Once the captured clip corresponds to the set duration in the field **DUR**, the record operation will be stopped automatically. If no duration is set, you can termi-

nate the record manually whenever you want by clicking the record button again.



When the record is terminated manually, the recorded data will be saved to the file (depending on the configuration in the menu **Configuration...** see section “Ingest” on page 5-19). When pressing the record button again, a new file will be created.

When the record has finished, you can switch to the playout mode and review the recorded material immediately: The metaclip of the captured clip will be automatically set as the content to be played out (see section “Selecting Content for Playout” on page 4-57).

### 4.5.5 How to Autoedit Record with the VENICE Server

In the ingest mode you can perform an autoedit record with the VENICE server while at the same time frame accurately controlling the playout of the externally connected player. The following describes what to do to perform an autoedit record.



For this procedure the external device has to be connected correctly to the VENICE server (video, audio, timecode, and RS-422). Additionally, the device has to be set to accept remote control.

Video channel tabs can be preconfigured for certain tasks via e.g. project files or presets. Then it may not be necessary to perform all the configurations described below (see section “Preconfiguring the VENICE Client Software” on page 5-3). This has to be made by the ‘Superuser’.

#### Setting up the Ingest Mode

To perform an autoedit record in the ingest mode, you first have to configure where and how to record with the VENICE server:



Some settings may not be available for the user level ‘User’. In this case you will have to log in as ‘Superuser’ or ‘Administrator’.

- If necessary, configure the input format so that it matches the signal present at the server’s input with the **SETTINGS** option (see section “Configuring the Input Settings” on page 5-4) as ‘Superuser’.
- Determine a file name and path for the file(s) to be recorded with the **DESTINATION** option as described in section “Selecting the Storage Location and File Name” on page 4-24.
- If necessary, specify the essences that you want to record with the **INPUT SELECT** option (see section “Selecting Essences for Record” on page 4-23).



- If necessary, set up the file format(s) of the file(s) to be recorded via the **SETTINGS** option (see section “Configuring the Output Settings (File Settings)” on page 5-6) as ‘Superuser’.
- In case you want to record on Avid’s ISIS or Interplay (file format MXF (for ISIS & Interplay)), you can specify metadata for the recorded files with the **METADATA** option (see also section “Avid Workflow” on page 4-52).

After this you have successfully set up the VENICE server for a record operation and you now have to configure the external device for the playout.

### Setting up the External Device for the Playout

To perform an autoedit record in the ingest mode, you have to set up the external device properly so that it will play out the correct material during the record operation:

- Perform the steps described in section “How to Control the External Device” on page 4-30 and set an in- and outpoint for the playout.

When this is done, you can start the record.

### Starting the Record

When everything is set up properly, you can start the autoedit record at any time:

- If not already activated, switch the operating elements to the record mode by selecting the tab **VENICE** (see section “Controlling the Devices (Player (VTR) / VENICE)” on page 4-28).
- Make sure that the autoedit record mode is selected with the respective operation switch (see section “Operating Elements of the Recorder (Tab VENICE)” on page 4-29).
- To start the autoedit record, press the record button () of the operation controls.



The operating elements will be unavailable when the input settings are not set to the same raster as present at the input and/or the external player is not set to accept remote control.

The VENICE server then performs the record in accordance with your settings: The external player will go to its preroll position and start playing from there. The video overlay will show you what is present at the server’s input. As soon as the specified inpoint on the external player is reached, the record is performed by the VENICE server up to the point of the set outpoint/duration. During the record the characters of the

greater position field turn red. Once the outpost is reached, the record will be terminated automatically.



To terminate the autoedit record manually, you have to click the record button again.

When the record has finished, you can switch to the playout mode and review the recorded material immediately: The metaclip of the captured clip will be automatically set as the content to be played out (see section “Selecting Content for Playout” on page 4-57).

### 4.5.6 How to Perform a Remote Mode Record

In the ingest mode you can control the video channel on the VENICE server by remote and send a record command. After receiving the command the channel will record the incoming signal according to your settings and save the captured material accordingly.

To prepare the video channel for a remote mode record, perform the following:



Some settings may not be available for the user level ‘User’. In this case you will have to log in as ‘Superuser’ or ‘Administrator’.



Video channel tabs can be preconfigured for certain tasks via e.g. project files or presets. Then it may not be necessary to perform all the configurations described below (see section “Preconfiguring the VENICE Client Software” on page 5-3). This has to be made by the ‘Superuser’.

- If necessary, configure the input format so that it matches the signal present at the server’s input with the **SETTINGS** option (see section “Configuring the Input Settings” on page 5-4) as ‘Superuser’.
- Determine a file name and path for the file(s) to be recorded with the **DESTINATION** option as described in section “Selecting the Storage Location and File Name” on page 4-24.
- If necessary, specify the essences that you want to record with the **INPUT SELECT** option (see section “Selecting Essences for Record” on page 4-23).
- If necessary, set up the file format(s) of the file(s) to be recorded via the **SETTINGS** option (see section “Configuring the Output Settings (File Settings)” on page 5-6) as ‘Superuser’.
- In case you want to record on Avid’s ISIS or Interplay (file format MXF (for ISIS & Interplay)), you can specify metadata for the recorded files with the **METADATA** option (see also section “Avid Workflow” on page 4-52).
- Then select the protocol that should be used for the remote mode and press the button **RMT** (see section “Remote Mode” on page 4-18).



After this the button **RMT** will be labelled in blue font indicating that the remote mode is activated. Then the VENICE server waits for a record command to begin the capturing of the signal present at the input of the VENICE server.

To terminate the remote mode record, perform the following:

- Either send the respective command or terminate the remote mode by clicking the remote button again (i.e. deactivate the button **RMT**).

This stops the remote mode capturing process right away.

### 4.5.7 Recording a Batch

In the ingest mode you can record a batch list when switching to the batch record mode (see section “Operating Elements of the Recorder (Tab VENICE)” on page 4-29). With it you can perform several autoedit records in a single step:

- How to set up an autoedit record is described in section “How to Autoedit Record with the VENICE Server” on page 4-33.
- How to create and use a batch list is described in section “The List Editors” on page 3-27.

When a batch record is started via the record button (  ) of the operation controls, the software internally sorts the batch list in C-mode first (i.e. by tape name and source inpoint). Then it records the items in this order and you will be informed about the progress in a special window:

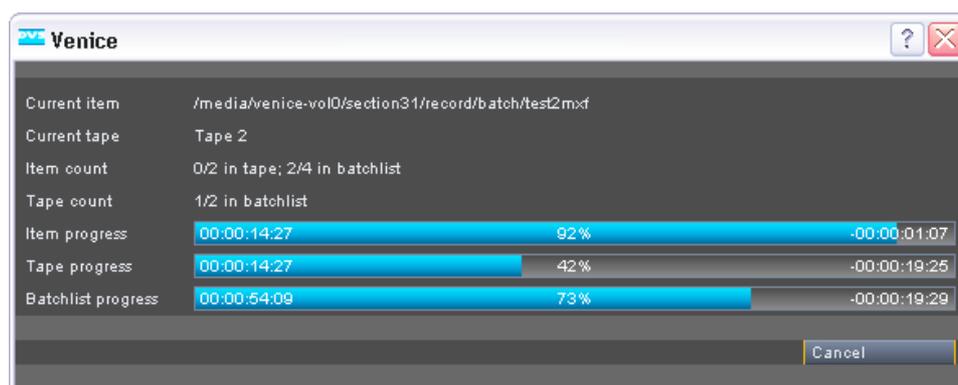


Figure 4-23: Progress of a batch record

If different tape names have been defined for the items to be recorded (see section “Configuring the Input Settings” on page 5-4), you will be asked by the software to insert the respective tape each time another tape has to be recorded.

## 4.5.8 How to Crash Record with the External Device (VTR)

In the playout mode you can perform a crash record on the externally connected device. It will then immediately record the signal that is present at its input, e.g. the content that is played out manually with the VENICE server.

To initiate a crash record, perform the steps as described below:



The systems you are working on operate with voltages that can be hazardous to your health. Never work on the systems or access their interior with the power cable(s) being plugged in. Do not reach into any parts of the systems. Make sure the power supply is disconnected from the components you intend to work on.



For this procedure the external device has to be connected correctly to the VENICE server (video, audio, timecode, and RS-422). Additionally, the device has to be set to accept remote control.

A crash record can be started without further ado, meaning, if not required, you do not have to set anything. However, you can record the signal given out by the VENICE server (see section “How to Play Out Clips Manually” on page 4-63).

- If not already activated, switch the operating elements to the record mode by selecting the tab **RECORDER** (see section “Controlling the Devices (Player (VTR) / VENICE)” on page 4-64).
- Make sure that the crash record mode is selected (see section “Operating Elements of the Recorder (Tab RECORDER)” on page 4-65).
- If appropriate, use the operating elements and the video overlay to move to the correct position on the external device for the data to be recorded.
- Afterwards press the record button (  ) of the operation controls.

The external device will then start the record and as an indication for this the characters of the greater position field turn red. The video overlay will show you what is present at the server’s input. You can terminate the record manually whenever you want by clicking the record button again.



## 4.5.9 How to Autoedit Record with the External Device

In the autoedit record mode you can control a playout by the VENICE server while at the same time recording it frame accurately with the external device. The following describes what to do to perform an autoedit record.



The systems you are working on operate with voltages that can be hazardous to your health. Never work on the systems or access their interior with the power cable(s) being plugged in. Do not reach into any parts of the systems. Make sure the power supply is disconnected from the components you intend to work on.



For this procedure the external device has to be connected correctly to the VENICE server (video, audio, timecode, and RS-422). Additionally, the device has to be set to accept remote control.

Video channel tabs can be preconfigured for certain tasks via e.g. project files or presets. Then it may not be necessary to perform all the configurations described below (see section “Preconfiguring the VENICE Client Software” on page 5-3). This has to be made by the ‘Superuser’.

### Setting up the Playout Mode

To perform an autoedit record in the playout mode, you first have to configure what and how to play out with the VENICE server:

- Select the video and audio content that should be played out with the **SOURCE** option as described in section “Selecting Content for Playout” on page 4-57.
- If necessary, specify the essences for the playout with the **OUTPUT SELECT** option (see section “Selecting Essences for Playout” on page 4-62).
- If necessary, configure the output format to your requirements with the **SETTINGS** option (see section “Configuring the Output Settings” on page 4-56) as ‘Superuser’.
- If not already activated, switch the operating elements to the player mode by selecting the tab **VENICE** (see section “Controlling the Devices (Player (VTR) / VENICE)” on page 4-64).

As soon as the operating elements of the player are activated and video content is selected for a playout, the video overlay will show you the selected content.

- If wanted, set an in-/outpoint or duration for the content to be played out in the position controls (see section “Operating Elements” on page 3-15).

After this you have successfully set up the VENICE server for a playout and you now have to configure the external device for the record.

## Configuring the External Device for the Record

To record the output of the VENICE server with the external device, the device has to be set up properly:

- If not already activated, switch the operating elements to the record mode by selecting the tab **RECORDER** (see section “Controlling the Devices (Player (VTR) / VENICE)” on page 4-64).
- Make sure that the autoedit record mode is selected (see section “Operating Elements of the Recorder (Tab RECORDER)” on page 4-65).
- Use the operating elements and the video overlay to search for the exact inpoint in the material of the externally connected device.
- Press the **IN** button in the operation switches to set the inpoint to the selected position. Alternatively, you can enter the respective position manually in the entry field of the inpoint and afterwards press [Enter].
- After that use the controls to move to the wanted outpoint in the material.
- Click the button **OUT** or enter the position in the respective entry field to the right of the **OUT** button and afterwards press [Enter].

With this the selected in- and outpoint will be shown in the associated entry fields of the operating elements and the duration will be set accordingly.



Alternatively, you may also specify one of the entries for in- or outpoint and afterwards set the duration of the record.

As the next step you have to start the record.

## Starting the Record

When everything is set up properly, you can start the autoedit record at any time:

- To start the autoedit record, press the record button () of the operation controls.

The VENICE server will then initiate the record on the external device: The external device will go to its preroll position and start playing from there. As soon as the specified inpoint is reached, the playout of the server starts and the external device performs the record up to the set outpoint/duration (characters in the greater position field turn red). After this the playout operation of the VENICE server stops automatically. Once the external device stops its operation (postroll), the video material has been recorded successfully on the external device.



To terminate the autoedit record manually, you have to click the record button again.



## 4.5.10 Read While Write

With VENICE you can access the already saved material of a clip while it is still being recorded, often also called 'read while write'. With this you can, for instance, play out the already saved part of a clip or use it for transforming (e.g. for subclipping). The file formats that can be used for read while write are all still image formats and the container file formats saved with MXF OP-1a.

### Read While Write with Still Image Formats

When loading a clip of a still image format while it is still being written, only the video up to the frame that was already recorded at the time of the clip loading will be shown in the VENICE client software. To get the last recorded material, you have to load the clip anew.

### Read While Write with Container File Formats (MXF OP-1a)

At the start of the record, when a container file format in MXF OP-1a is used, the duration as specified for the ingest will be set in the metadata of the container. If no duration is set, by default one hour will be assumed.

When loading this clip while it is still recorded, the timeline in the VENICE client software will show you the complete duration as detailed in the metadata. If data has not been recorded yet, the frame that was last played out of this clip will be output.



Because of this behavior, when scrubbing the timeline in a part where no material is available yet, it may seem as if there is video recorded although there is not.

When your record is longer than the duration stored in the metadata (e.g. when no duration was specified), to get the last recorded material you have to stop the record which will update the metadata, and then load the clip anew.

## 4.5.11 Play After Write

The automated play after write functionality allows a true visual quality check. It reads the open file being currently recorded directly from the hard disk. The operator can see the file and can judge its quality directly after the video has passed the encoding process and has been written to the storage.



Please note that for the play after write feature an additional channel for playout is needed. Furthermore, the ingest and playout channels need to be on the same VENICE server.

To perform a play after write operation, heed the following:

- Configure a crash record operation as described in section “How to Crash Record with the VENICE Server” on page 4-32.
- In the operating elements (section “Operating Elements” on page 3-15) select from the drop-down list **PAW OFF** to the left of the record button, the channel you want to use for the play after write operation.

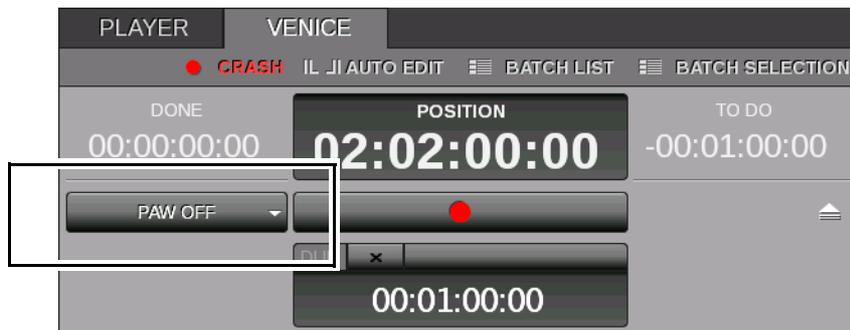


Figure 4-24: Setting up a play after write operation

When selecting a channel from the drop-down list, the VENICE client software will connect to it automatically. When you start the crash record operation on the ingest channel, the playout on the channel for the play after write operation will start to play out automatically.



The play after write channel plays out the incoming signal from the ingest channel incl. all configurations and settings.

- For switching off the play after write mode again, select from the drop-down list to the left the option **PAW OFF**.

This will stop the playout operation and disconnect the channel automatically.



When your record is longer than the duration stored in the metadata (e.g. when no duration was specified), to get the last recorded material you have to stop the record which will update the metadata, and then load the clip anew.



Supported formats for play after write are:

Format	Codecs
MXF OP-Atom (not for ISIS/Interplay)	– DNxHD
MXF OP-1a	– DNxHD – AVC-Intra 100 – AVC-Intra 50 – DV 25 – DVCPRO 25/50 – IMX 30/40/50 – XDCAM HD 18/35/50



The VENICE client software does not support MXF OP-Atom for ISIS/Interplay, MOV, DV-DIF, GXF and all uncompressed formats for play after write.

## 4.6 Recording with the Record Scheduler

Besides the record features in the VENICE client software it is possible to plan and set record jobs in Spycer, too. With the record scheduler in Spycer it is easy to manage several record jobs with a few clicks. When arriving at the set inpoint the VENICE server will start recording automatically. The record is carried out over SOAP protocol with the FIMS standard (see <http://wiki.amwa.tv>). To configure the software for FIMS, the administrator has to change settings in the respective file which is described in section "Configuring Spycer for the Record Scheduler" on page 6-26. Then the 'Superuser' has to create a project file that can be selected for the record operation (see section "Projects" on page 2-18). The user interface of the record scheduler and explanations about how to work with it can be found in the following sections.

### 4.6.1 The Record Scheduler

After having started Spycer you can switch to the record scheduler by pressing the button **RECORD SCHEDULER** on the top left of the user interface.

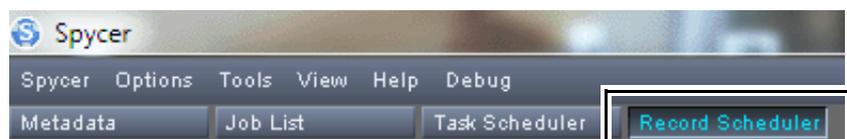
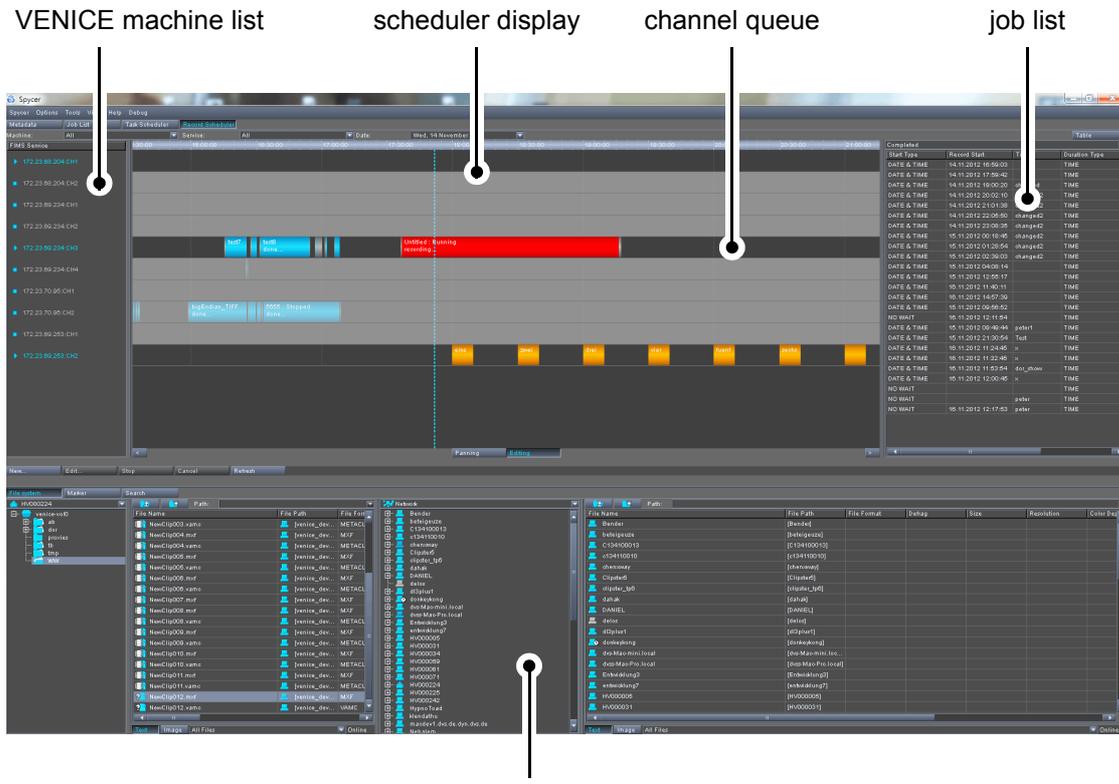


Figure 4-25: Switching to the record scheduler



You will see a similar screen:



browse and search area

Figure 4-26: Record scheduler in Spycer

To the left of the scheduler display you find the VENICE machine list, a list of all VENICE devices configured for FIMS in form of its identifiers like IP addresses and channel numbers or host names and channel numbers. You can switch the display to **ALL** or to a specific device by using the drop-down list **Machine:** at the top left of the user interface. The identifiers of the VENICE devices are displayed in different colors meaning different states as described in the following:

Color	Explanation
blue font with triangle to the left	Channel is started and FIMS service is added, you can record on this channel
grey font with square to the left	FIMS service is added but channel has not been started yet
grey font with question mark to the left	No FIMS available, server is offline, does not answer or is occupied by another VENICE user



If all configurations have been made appropriately and still no VENICE device providing FIMS is available, please contact the DVS service department.

The machine list offers context menus depending on the state of the VENICE devices. You can choose between the following:

Menu	Explanation
<b>Stop</b>	Stops an activated channel and deactivates it.
<b>Lock</b>	Locks an active channel to prohibit use by others.
<b>Start</b>	Starts an inactive channel.
<b>Clear</b>	Clears all jobs from the channel queue.

At the top of the scheduler display you find the drop-down lists **Machine:**, **Service:** and **Date:**

List	Explanation
<b>Machine:</b>	This drop-down list offers you the option <b>ALL</b> and lists all the VENICE devices in form of IP addresses or host names as detailed in the <i>fims_services.cfg</i> file for selection.
<b>Service:</b>	This drop-down list offers you the option <b>ALL</b> or lists the channel numbers of a device when having selected a specific device from the drop-down list <b>Machine:</b> .
<b>Date:</b>	Displays the current date and offers you the possibility to select a day from a calendar.

Furthermore, in the upper half of the user interface, right in the middle you find the scheduler display with a timeline and a vertical dashed blue line that represents the current moment. The timeline showing the time of day is located on top of the scheduler display. It conforms to the client's local time. By using the mouse wheel you can zoom in or out of the scheduler display. The displayed timeline will then vary from max. 15 minutes to 14 days.

The display can be enlarged by clicking on the arrow buttons (   ) to the bottom left and right of the scheduler display. The record jobs are represented by record bars in the channel queues. Depending on the state of the job they are displayed in different colors. You can read the state of the record as well as the job name from the bars. By right-clicking into the scheduler display several context menus can be invoked depending on mode and location:

- When right-clicking on a channel queue when the **PANNING** button is activated, you can choose to switch to **EDITING MODE** from the context menu and vice versa.
- When right-clicking on a record bar, different context menus are invoked depending on the state of the bar.



Record Bar	Provided Context Menu
orange: queued	When having added a record job to the channel queue it is displayed as an orange record bar. In the context menu of the orange record bar you find the options <b>Edit</b> (Opens the <b>Edit FIMS job...</b> window), <b>Cancel</b> (cancels the record job) and <b>Open directory</b> (opens the directory of the record job in the 'browse and search area').
blue: completed	Completed jobs are represented by blue record bars. In the context menu of the blue record bar you find the options <b>Reschedule</b> (Opens the <b>New FIMS job...</b> window to reschedule a job), <b>Open directory</b> (opens the directory of the record job in the 'browse and search area') and <b>Open file</b> (opens the file in the video overlay of Spycer).
red: running	Jobs that are currently running are represented by red record bars. In the context menu of the red record bar you find the options <b>Stop</b> (stops the record), <b>Edit</b> (Opens the <b>Edit FIMS job...</b> window), <b>Cancel</b> (cancels the job and the record bar disappears) and <b>Open directory</b> (opens the directory of the record job in the 'browse and search area').

Several tool tips help you with further information. You can, for example, read the configurations of a record bar depending on its state when pointing the mouse cursor over it.

To the right of the record scheduler you find a drop-down list that displays a job list depending on the selected option and the selected channel. You can choose between **Waiting**, **Completed**, **Stopped**, **Failed** and **Canceled**. The list is sorted upwards by the starting time of the jobs. Below the job list is a slider that can be used to view the hidden file information, too. You can select a particular record job by clicking on it or make a multi-selection by selecting and simultaneously pressing the [Ctrl] key. The job list offers a context menu, too. Right-click on the selected channel(s) and choose the wanted option. The context menus differ a little, depending on the option that is selected from the job list. Mostly you can choose between **Reschedule**, to start a new job in the **New FIMS job...** dialog window, the option **Open directory** to open the file in the 'browse and search area' or **Open file** to see the content in the video overlay in Spycer. For further information about this refer to section "Working with the Record Scheduler" on page 4-47.

Below the machine list and the scheduler display are several buttons to be found. They offer you the following functions:

Button	Description
<b>NEW...</b>	Opens the <b>New FIMS job...</b> window.
<b>EDIT...</b>	This button is enabled when a record bar is selected and opens the <b>Edit FIMS job...</b> window.
<b>STOP</b>	This button is enabled when a record bar is selected and stops the operation.
<b>CANCEL</b>	This button is enabled when a record bar is selected and cancels the operation.
<b>REFRESH</b>	This button updates the user interface.
<b>PANNING</b>	This button activates the panning mode. This is the mode for viewing and sliding through the scheduler display by using the mouse cursor in form of a hand symbol.
<b>EDITING</b>	This button activates the editing mode. This is the mode for editing and adding new record jobs to the queue by dragging them into an activated channel queue. For further information about this see section "Working with the Record Scheduler" on page 4-47.

For a further description of the 'browse and search area' please refer to the "Spycer" user guide.

## 4.6.2 Working with the Record Scheduler

To work with the record scheduler, a project file must have been created before. This project file contains all settings and the path needed for a record operation. If a project file already exists, you can select it in the dialog window **New FIMS job....** If no project file exists, you first have to create one before you can start working with the record scheduler (see section "Projects" on page 2-18).



Projects or scenarios can only be created when logged in as 'Superuser' or 'Administrator'.

To start working with the record scheduler, perform the following:

- Select from the machine list the VENICE server you want to use for the record operation.
- Right-click on the VENICE server with the respective channel (port) to invoke its context menu.
- Select the option **Start** from the context menu.

Alternatively you can select the VENICE device and the respective channel number from the drop-down lists **Machine:** and **Service:** to be displayed.





You cannot start a VENICE channel in the record scheduler in Spyker when having connected to it in the VENICE client software. Please disconnect all channels you want to use in the record scheduler (see section “Connecting to a Video Channel” on page 2-11).

After having started the channel, the device identifier will change to blue font and the little icon to the left of the device will turn from a square to a triangle indicating its active state. The channel queue in the scheduler display will turn to its active state in dark grey. The channel will be displayed as used by ‘venice’ in the channel connection tab of the VENICE client software.

To add a new record bar into the queue, you simply have to drag it in after having changed the mode to ‘editing’ by clicking the button **EDITING** in the middle of the user interface. Then, when pointing the mouse over the active channel queue you will see a small white vertical line that indicates the inpoint of the record. There are several ways to perform this:

- Click into the wanted inpoint and drag the mouse cursor to the wanted approximate end point of the record and release it again or
- click on the button **NEW...** in the center left of the user interface or
- when in the **PANNING** mode, click into the active channel queue and drag the record job in by simultaneously pressing the [Shift] key.

An ‘open end’ record job can be added to the channel queue by simply clicking into the wanted inpoint in the **EDITING** mode.



Due to a longer preroll time when loading the project it is recommended to use small project files or to limit them to sheer ingest projects.

When having performed one of these actions, the dialog window **New FIMS job...** will open up where you can configure the record more detailed. The following options are to be found:

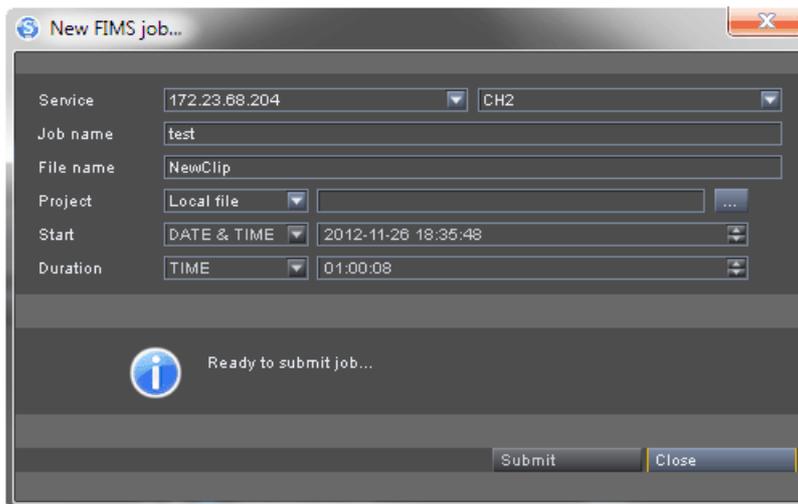
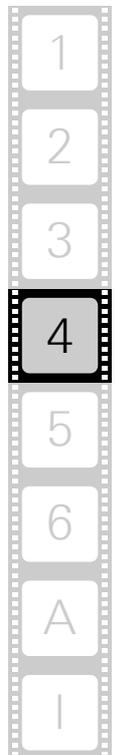


Figure 4-27: Dialog window for the record configuration

Label	Item(s)	Description
<b>Service</b>	VENICE devices	Lists all configured IP addresses (host names) for selection.
	channel number	Lists all channel numbers for selection.
<b>Job name</b>	-	Entry field for entering a job name.
<b>File name</b>	-	Entry field for entering a file name.
<b>Project</b>	project option	This drop-down list provides the options <b>Recent records</b> that opens recently selected project files for a record and <b>Local file</b> with a directory button to browse a project file from a local directory.
	projects/ directory	Depending on the selection from the project option list this drop-down list offers the last 10 recently selected projects ( <b>Recent records</b> ) or a directory button that can be used to open a directory and browse a project file ( <b>Local file</b> ).
		Only in the <b>Edit FIMS Job...</b> window: When having selected the list item <b>Predefined</b> the last defined project file will be used for the record job.



Label	Item(s)	Description
<b>Start</b>	starting option	Offers you the options <b>NO WAIT</b> , <b>DATE &amp; TIME</b> , <b>TIMECODE</b> to set the inpoint of the record job.
	start entry field	Displays entry fields depending on selected start option. It either starts the record immediately ( <b>NO WAIT</b> ), displays a field to enter the date and time exact to the second ( <b>DATE &amp; TIME</b> ) or gives you the possibility to enter a frame-accurate timecode ( <b>TIMECODE</b> ).
	 To use the starting option <b>TIMECODE</b> , you have to set the appropriate input signal in the VENICE client software (see section "Configuring the Input Settings" on page 5-4). All input signals except <b>Internal TC</b> will work.	
<b>Duration</b>	duration option	Offers a drop-down list with the options <b>TIME</b> and <b>OPEN END</b> .
	duration entry field	When having selected <b>TIME</b> in the duration option you can enter the duration or adjust it exact to the second by using the top or down arrows. When having selected <b>OPEN END</b> the server will record until you stop the record manually.

After having added a record job to the queue, you will see it as an orange record bar. An adequate preroll and postroll time for the VENICE server will be added automatically, shortly before the record begins. When the vertical dashed blue line has arrived at the preroll time, it will be visible in grey color and the record bar will change its color to red. Uninterrupted recording of different jobs in a channel queue is not possible, due to the necessary preroll and postroll times.

Record bars that are not yet recording can be moved to another time position in the timeline.

- Point the mouse cursor over the record bar until it changes its appearance to a cross-arrow symbol.
- Click and move the record bar to the right or to the left to change its position in the timeline.

The length of the record bar and therefore the duration of the record can be adjusted by dragging the bar at its left and right endings.

- Point the mouse cursor over an ending until it changes its appearance to a horizontal resize arrow to pull the bar to its wanted length.

When the record has started, you can only change its endpoint by using this method. In all described cases the dialog window **Edit FIMS job...** will open up where you can configure the record further and more detailed.



To change e.g. the duration of a record, you can use the drop-down list **Duration** in the **Edit FIMS job...** window, too.



## 4.7 Avid Workflow

The Avid workflow for VENICE is optionally available. With it you can work directly on Avid’s ISIS or use the production asset management Interplay. The DVS solution offers an additional 1U server appliance providing 10 Gb Ethernet or 1 Gb Ethernet connectors for media and metadata transfers as well as USB 3.0 connectors for the connection of media drives. It is linked to the VENICE base system and enables direct signal ingest via HD-SDI. Up to four channels can be ingested in parallel together with simultaneous proxy file generation. All comprehensive standard features of VENICE such as VTR control and batch capturing are also available. Metadata can be added to media files easily (see section “Metadata” on page 5-21). Below you see a figure of the Avid workflow in VENICE:

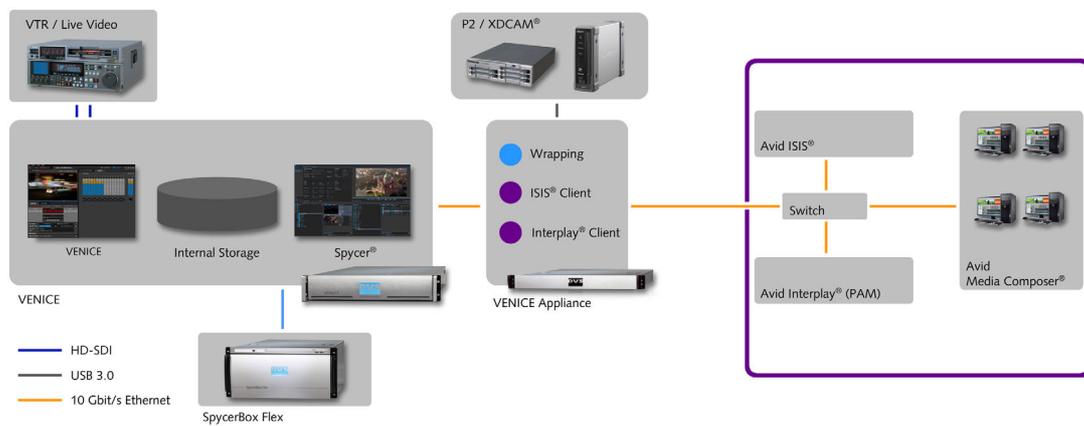


Figure 4-28: The Avid workflow option for VENICE

After a correct installation and setup by DVS, ISIS and Interplay are mounted as virtual drives in Spycer as in the following figure:

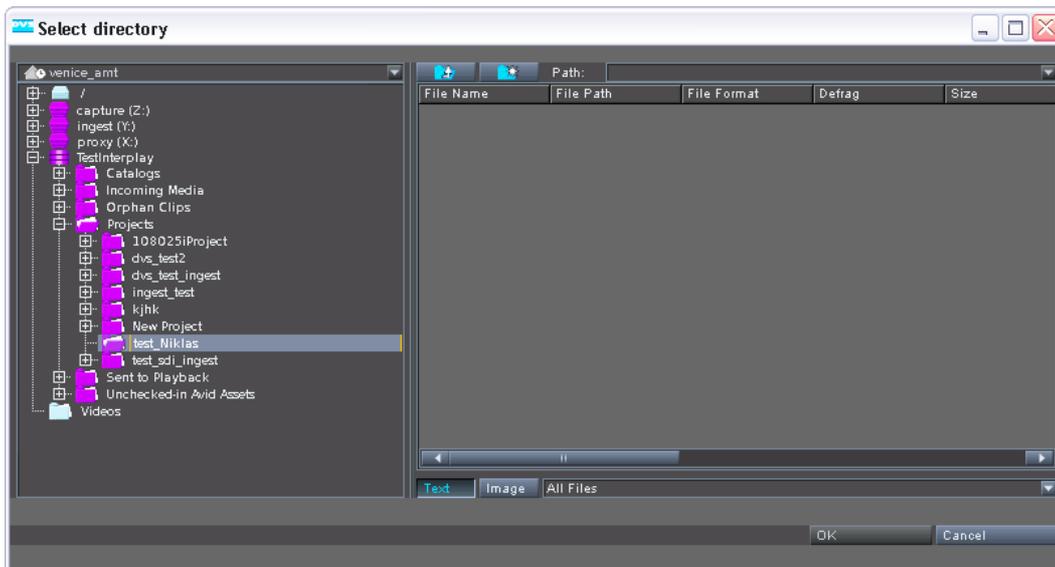


Figure 4-29: ISIS and Interplay in VENICE

Interplay projects and workspaces located on the ISIS storage can be used for ingest as well as playout tasks. Via Spycer you can also drag 'n' drop files to projects or workspaces directly. Then you can select as the record destination either a workspace located on the ISIS storage or an Interplay project. When setting the file format to MXF (for ISIS & Interplay) and selecting a proper codec, an ingest via HD-SDI will be performed in Avid compatible formats and the audio/video essences will be written to the corresponding workspace or project on the ISIS storage. Recorded material can be worked upon directly while it is still being recorded ("Frame chase Editing"), even without the ISIS or Interplay. Furthermore, prior to the record, metadata can be specified in the configuration options (see section "Entering Metadata" on page 4-26) and in the menu option **Configuration...** (see section "Configuration" on page 5-15):

1

2

3

4

5

6

A

I

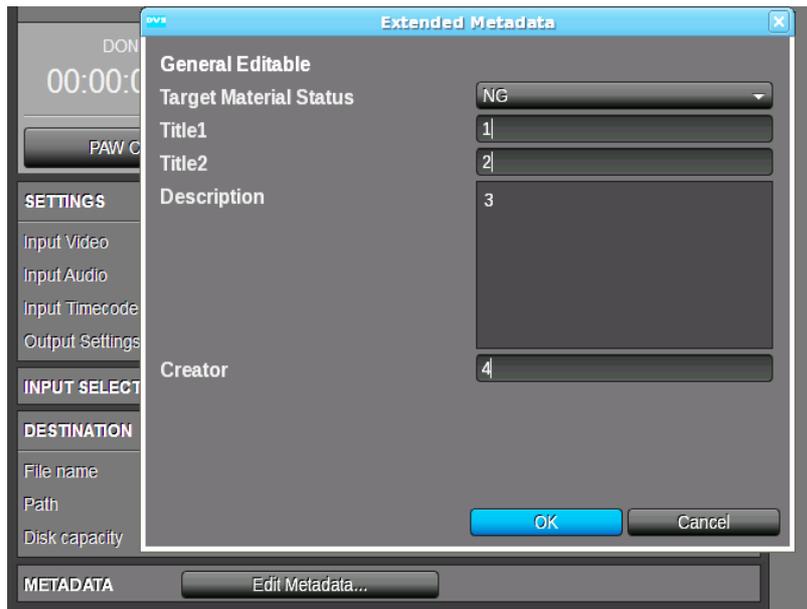


Figure 4-30: The metadata option (expanded)

When ingesting on ISIS directly, an AAF as well as an XML file will be created containing among others the metadata information. When performing the record for an Interplay project, the metadata will be transferred to Interplay and written to its database. Up to four channels of AVC-Intra 100 can be recorded in parallel and high-speed ingest of tapeless media is also possible. The following codecs are supported when working with the Avid Workflow Option:

Category	Codecs
General	– DNxHD 36, 60, 90, 115, 120, 175, 185, 220 Mbps
Sony XDCAM support	– DV 25 Mbps – XDCAM IMX 30, 40, 50 Mbps – XDCAMEX 35 Mbps – XDCAM HD 18, 25, 35, 50 Mbps
Panasonic P2 support	– DV 25 Mbps – DVCPRO 25, 50 Mbps – DVCPRO HD 100 Mbps – AVC-Intra 50, 100 Mbps
Ikegami GFCAM support	– MPEG2 SD – MPEG2 HD

In the transform mode non-Avid compliant files are transcoded to Avid ISIS/Interplay in high speed. Some examples of supported file formats are:

- Apple QuickTime with ProRes 422 and 444 (LT, HQ)
- Panasonic AVC-Intra 200
- Single-frame sequences: DPX, TGA, TIFF, BMP
- MPEG-2 PS
- GXF



## 4.8 Playing Out with the VENICE Server

In the playout mode (see section “Selecting an Operation Mode” on page 4-14) you can play out the currently selected content:

- You can play out content manually.
- You can perform a crash record on an externally connected device.
- You can perform an automated playout of the content while at the same time frame-accurately recording it on the externally connected device (autoedit record).
- You can set the playout mode into remote mode to control the playout from an externally connected device.

All these procedures are explained in this section.



When controlling the video channel from a client, the images in the video overlay are transmitted via network. There may be a time delay until the material is displayed in the video overlay and it may seem as if drops occurred. Real drops on the server, however, will be automatically detected and you will be informed about them in the information area (see section “Message and Information Area” on page 3-21).

### 4.8.1 Configuring a Playout

Prior to playing out clips with the VENICE server you have to set up the playout and configure output related settings (see also section “Configuring the Operation Mode” on page 5-3). As a minimum you have to select content for a playout. This section describes the necessary settings that have to be made before playing out clips with the VENICE server.



Video channel tabs can be preconfigured for certain tasks via e.g. project files or presets. Then it may not be necessary to perform all the configurations described below (see section “Preconfiguring the VENICE Client Software” on page 5-3). This has to be made by the ‘Superuser’.

#### Configuring the Output Settings

To play out video and audio, you have to configure the output format appropriately via the option **SETTINGS** in the configuration options (see section “Configuration Options” on page 3-18). When clicking the button EDIT, a dialog window opens, showing all available settings. This option is allowed for the user level ‘Superuser’ and higher. For further information see section “Configuring a Playout” on page 5-8.

## 4.8.2 Selecting Content for Payout

Before anything can be played out you have to determine the content for the output. Open the option **SOURCE** in the configuration options (see section “Configuration Options” on page 3-18):



Figure 4-31: Source option (expanded)

There are several ways to select content for a payout:

1. You can enter the respective paths and file names manually.
2. You can select content via a dialog window.
3. You can drag 'n' drop the content from one of the browsing panes of Spycer.

All these procedures will be explained in this section.



You can also play out a playlist. For this its payout has to be set via the operating elements (see section “Operating Elements” on page 3-15) and the list has to be set up/uploaded in the playlist editor (see section “The List Editors” on page 4-76).

After a record operation (see chapter “Level Superuser” on page 5-1), the metaclip/batch list of the recorded content will be automatically set for a payout. With this you can review the captured material immediately after a record.

For details about the buttons **APPEND TO LIST** and **INSERT INTO LIST** see section “Configuration Options” on page 4-70.

### Entering Paths and File Names Manually

To select content for a payout, you can enter the respective paths and file name manually. Just start to enter something in the entry field for video/audio. This will open another dialog window where you can type in the respective path and clip name:



Figure 4-32: Entering a clip's path and name

In this window enter the path and file name of the clip on the VENICE server and confirm your entry with the **OK** button. The path must lead to the storage of the VENICE server you are currently connected to (it



can be a connected SAN system as well), and it must be entered as if you were operating on the server locally.

When entering the file name for a single file, for example, for a clip in a container format (e.g. \*.mxf or a VENICE metaclip), you can enter the file name as it is.

When entering the file name for a video clip that consists of still images, you have to observe the C notation usually with the syntax `<string>%0Yd.<ext>`:

<code>&lt;string&gt;</code>	Preceding string of file name
<code>%</code>	Marker that the following is a format string
<code>0</code>	If the output of the format string does not provide the stated length, fill it with zeros (0)
<code>Y</code>	Number of digits, for example, 5
<code>d</code>	Marker that the format string is a decimal number
<code>&lt;ext&gt;</code>	File extension

Example: `Hollywood_%05d.dpx`  
 Indicates a clip with still image files of the name  
*Hollywood\_<5-digit number>.dpx*

Perform this for video and audio separately with the available entry fields of the **SOURCE** option.



To empty the window for the path and clip name, can be performed by deleting the entry and then pressing the **OK** button.

### Selecting Content via a Dialog Window

To select content for a playout, you can use the buttons () to the right of the entry fields in the option **SOURCE** in the configuration options. They will open each a dialog window similar to a browsing pane in Spycer:



This window is generated by Spycer. Without a Spycer application installed it will not be available.

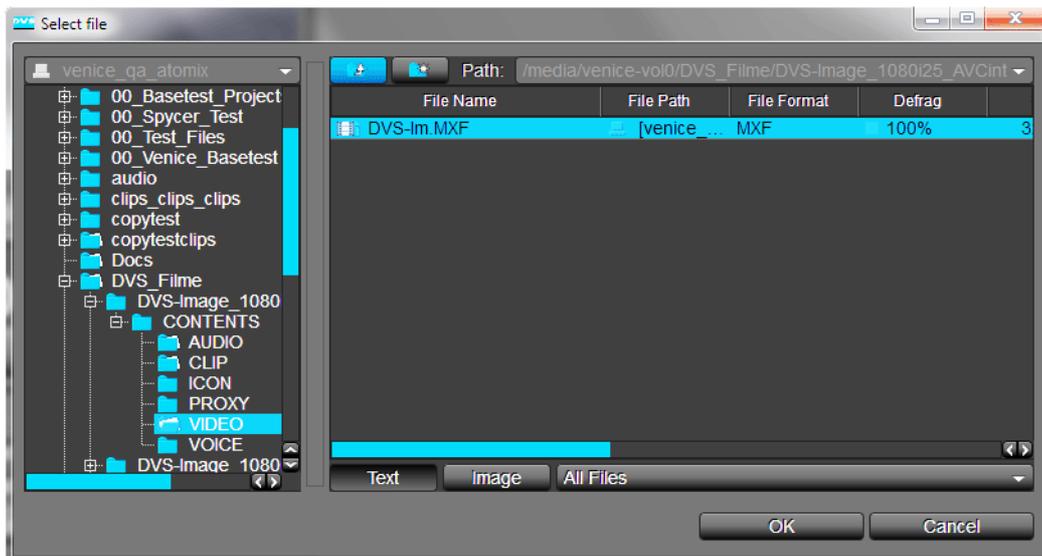


Figure 4-33: The dialog window to select content

This window shows you in the pane to the left in a directory tree the volumes/directories that are configured as watch folders in the Spycer application on the VENICE server. By clicking the plus/minus signs in front of an entry, the volume/directory can be expanded or collapsed.

Once a volume/directory has been selected, its contents will be displayed in the pane to the right. From there select the wanted file and click the **OK** button. You can multi select clips by clicking them and simultaneously pressing the key [Ctrl] or multi select several clips in one step, by clicking the first clip, pressing [Shift] and clicking the last wanted clip. Simply click the button **OK** to confirm and all selected clips will appear e.g. as a playlist in the clip list area (see section “The List Editors” on page 3-27). Afterwards the path and file name of the clip will be displayed in the respective entry field of the **SOURCE** option. You may have to perform this for video and audio separately.



This window provides more items than explained here. With a fully licensed Spycer it can even be used for a data management of the contents stored on the server (via the context menus you can e.g. copy, move, delete, defragment, etc.). Further information about this and the items provided by this window can be found in the “Spycer” user guide.

### Previewing Content via the Dialog Window

With the buttons **TEXT** and **IMAGE** in the lower middle of the directory window you can select between textview and imageview. In the imageview you have the possibility to preview content before selecting it into the VENICE client software.



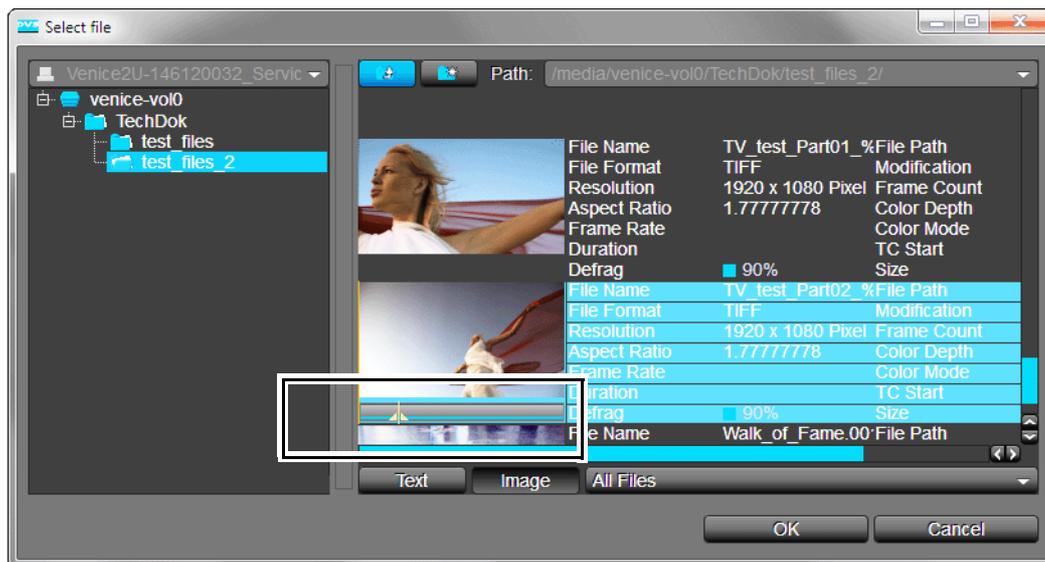


Figure 4-34: The dialog window in thumbnail view

For this you simply have to click the respective clip. A scrub bar will appear in the thumbnail which you can scrub forwards and backwards to preview the video clip.



Previewing content via the scrub bar in the directory window is only possible for video files.

### Selecting Content Via Spycer

You can drag 'n' drop content directly from the browsing panes of Spycer to the user interface of the VENICE client software. This is the most informative way to select content for a playout, because with Spycer you can gather further information about the content beforehand or preview it all in one.

Once the Spycer software is started, it shows two browsing panes where you can browse for data easily. Select from one of the network/system drop-down lists the VENICE server which you are currently connected to and browse in the directory tree to the content that you want to play out. When the audio and/or video clips are displayed in a browsing pane of Spycer, they can be dragged and dropped anywhere on the user interface of the VENICE client software:

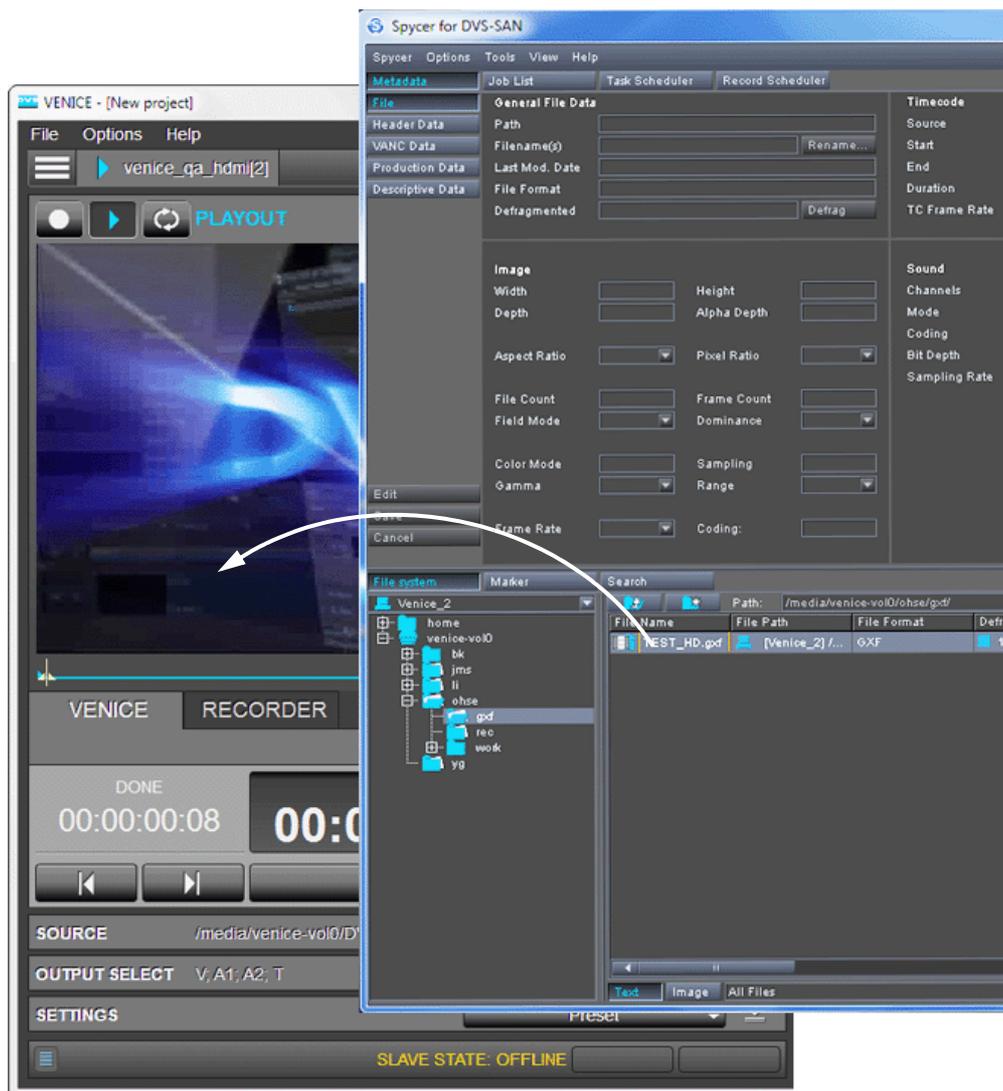


Figure 4-35: Drag 'n' drop from Spycer

Afterwards the path and file name of the clip will be displayed in the respective entry field of the **SOURCE** option. You may have to perform this for video and audio separately.

Alternatively, you can drag 'n' drop a file directly on one of the entry fields of the **SOURCE** option, which would take the file name of the dragged clip as if it were entered manually.



The content must be located on the storage of the VENICE server which you are currently connected to.

Further explanations of Spycer and its usage can be found in the "Spycer" user guide.



### 4.8.3 Selecting Essences for Playout

With the **OUTPUT SELECT** option (section “Configuration Options” on page 4-70) of the playout mode you have to select the essences (type of material) that you want to play out. You can choose whether you want to play out video, alpha or configure the audio stream:

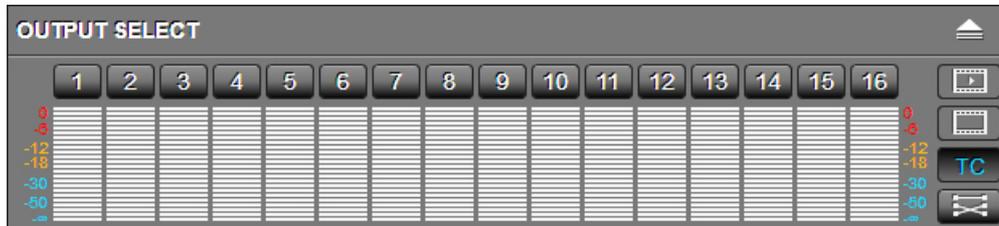


Figure 4-36: The output select option (expanded)

When the **OUTPUT SELECT** option is collapsed, the currently selected essences will be shown in abbreviated form to the right: **T** for timecode, **V** for video, **A**lpha for the alpha channel and **A**<x> for the selected audio channels.

As soon as video and/or audio content is available for a playout (see section “Selecting Content for Playout” on page 4-57), the matching essences will be activated in the user interface automatically.



It is not possible to give out timecode alone. At least one of the other essences has to be selected as well.

With the **OUTPUT SELECT** option choose the essences according to your needs. By activating or deactivating one of the provided buttons you can determine the essence that you want to play out. For example, if you want to play out video, the button ‘Video’  must be activated.

With the button ‘Alpha only’  you can choose whether you want to play out the alpha channel (key) of the video material instead of video. Then the video overlay and the video outputs will show you the alpha channel mask of the video clip. The parts of the images displayed in white are selected, black areas are not selected (i.e. keyed out).



Playing out video content and the alpha channel at the same time is not possible.

The audio peakmeters represent the 16 audio channels that are provided by the VENICE server. If, for example, channels 1 and 2 are selected

(if configured in the audio routing), the audio content will be played out at the channel outputs 1 and 2 of the VENICE server.



Further information about audio and the way it is handled can be found in section “About Source Timecode” on page 2-23, in section “Audio Routing” on page 4-16 or in section “Audio Monitoring” on page 4-86.

You can specify a number of audio channels in the audio routing and activate or deactivate them on the audio peakmeters of the output select option by clicking the audio channel buttons (see section “Audio Output/Input Select” on page 4-15).

With the ‘Timecode’ button  you can determine that timecode information should be sent to the connected external device (LTC only). It will be especially useful when inserting data on tapes of a tape machine via the insert mode of the playout mode (see section “Operating Elements” on page 3-15). Then you can explicitly select that the LTC timecode should be given out with this button. The button **ROUTING** can be used to configure the audio channels provided by the audio clip.

#### 4.8.4 How to Play Out Clips Manually

To play out clips in the playout mode, perform the steps as described below:



Some settings may not be available for the user level ‘User’. In this case you will have to log in as ‘Superuser’ or ‘Administrator’.



Video channel tabs can be preconfigured for certain tasks via e.g. project files or presets. Then it may not be necessary to perform all the configurations described below (see section “Preconfiguring the VENICE Client Software” on page 5-3). This has to be made by the ‘Superuser’.

- Select the video and audio content that should be played out with the **SOURCE** option as described in section “Selecting Content for Playout” on page 4-57.
- If necessary, specify the essences for the playout with the **OUTPUT SELECT** option (see section “Selecting Essences for Playout” on page 4-62).
- If necessary, configure the output format to your requirements with the **SETTINGS** option (see section “Configuring the Output Settings” on page 4-56) as ‘Superuser’.
- If not already activated, switch the operating elements to the player mode by selecting the tab **VENICE** (see section “Controlling the Devices (Player (VTR) / VENICE)” on page 4-64).

As soon as the operating elements of the player are activated and video content is selected for a playout, the video overlay will show you the selected content.



- If wanted, set an in-/outpoint or duration for the content to be played out in the position controls (see section “Operating Elements of the Player (Tab VENICE)” on page 4-64).
- Afterwards press the play button (  ) of the operation controls.

The VENICE server then performs the playout: The video content will be displayed in the video overlay and video as well as audio will be given out at the outputs of the VENICE server.

## 4.9 Controlling the Devices (Player (VTR) / VENICE)

In the playout mode the VENICE server assumes the role of the player while the external device is used as a recorder (see also section “Selecting an Operation Mode” on page 4-14). Via the tabs at the top of the operation switches in the operating elements you can switch to the operating elements of the VENICE server and the operating elements of the recorder (see section “Operating Elements” on page 3-15).

This section describes the controls available for the devices in detail. First the operating elements of the player (tab **VENICE**) and after that the operating elements of the recorder (tab **RECORDER**).

### 4.9.1 Operating Elements of the Player (Tab VENICE)

With the tab **VENICE** in the playout mode activated the operating elements of the player are displayed and the video overlay will show you the currently selected content (see section “Selecting Content for Playout” on page 4-57). The operating elements can then be used to move within or manually play out the selected content. Additionally, you can set an in- and/or outpoint for the content.

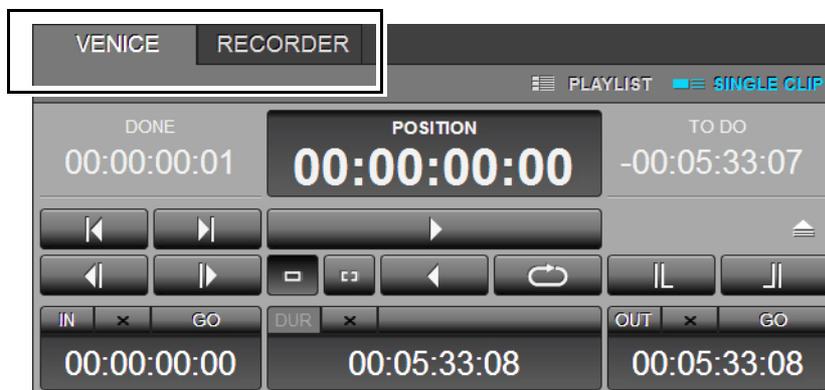


Figure 4-37: The operating elements in the player mode

You can use the items of the operating elements as described in section “Operating Elements” on page 3-15. The timeline that is controlled is the scrub bar (see section “The Scrub Bar” on page 3-22) of the selected content (single clip or playlist).



Further information about lists and how to use them can be found in section “The List Editors” on page 4-76.

## 4.9.2 Operating Elements of the Recorder (Tab RECORDER)

When the tab **RECORDER** is activated in the playout mode, the operating elements of the recorder are displayed and the video overlay will show you the input signal. The operating elements can then be used to control an external device connected via RS-422, for example, to cue to a certain position and/or to start a record operation of the content that the VENICE server plays out.

A record can be performed in two different modes which can be set via the switches above the operating elements:

- The autoedit mode enables you to frame accurately record on the externally connected device the content that is played out with the VENICE server.

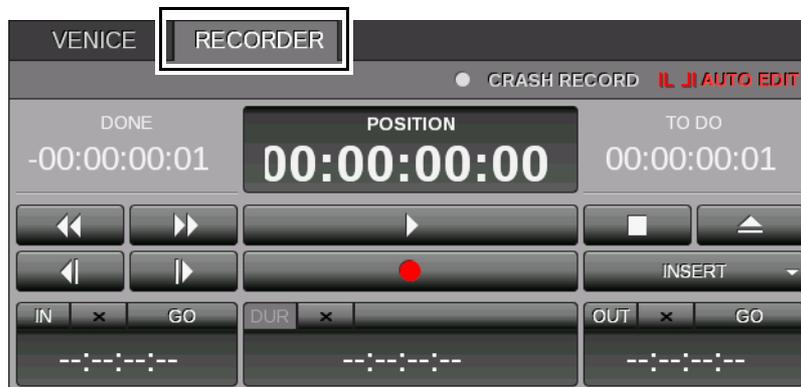


Figure 4-38: The operating elements in the autoedit mode

- The crash record mode allows you to start a record operation on the externally connected device at any time.



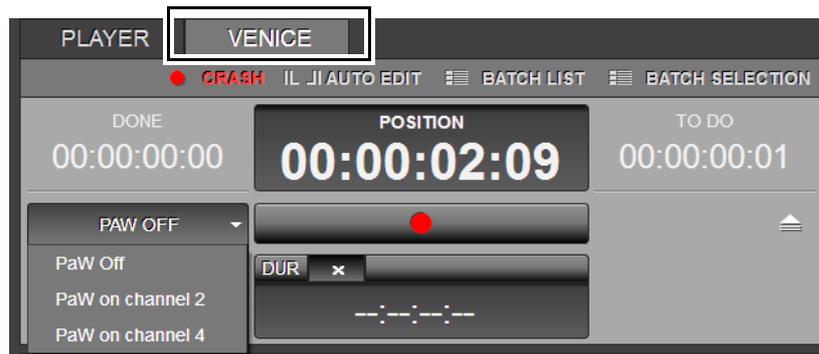


Figure 4-39: The operating elements in the crash record mode

You can use the items of the operating elements as described in section “Operating Elements” on page 3-15. The timeline that is controlled is the content of the external device, such as the tape of a VTR.

## 4.10 How to Perform a Payout in Remote Mode

In the payout mode you can control the video channel on the VENICE server by remote and send a play command. After receiving the command the channel will play out the currently selected content according to the settings specified with the configuration options.

### 4.10.1 How to Generally Play Out in Remote Mode

To prepare the video channel for a remote payout perform the following:



Some settings may not be available for the user level ‘User’. In this case you will have to log in as ‘Superuser’ or ‘Administrator’.



Video channel tabs can be preconfigured for certain tasks via e.g. project files or presets. Then it may not be necessary to perform all the configurations described below (see section “Preconfiguring the VENICE Client Software” on page 5-3). This has to be made by the ‘Superuser’.

- Select the video and audio content that should be played out with the **SOURCE** option as described in section “Selecting Content for Payout” on page 4-57.
- If necessary, specify the essences for the payout with the **OUTPUT SELECT** option (see section “Selecting Essences for Payout” on page 4-62).

- If necessary, configure the output format to your requirements with the **SETTINGS** option (see section “Configuring the Output Settings” on page 4-56) as ‘Superuser’.
- Then select the protocol that should be used for the remote mode and press the button **RMT OFF** (see section “Remote Mode” on page 4-18).

After this the button **RMT** will be labelled in blue font indicating that the remote mode is activated. Then the VENICE server waits for a playout command to begin the playout.

To stop the remote mode playout perform the following:

- Either send the respective command or terminate the remote mode by clicking the remote button again (i.e. deactivate the button **RMT**).

The VENICE server then stops the remote mode playout of the selected content.



When using a production control system such as AViTA by HiTech, further settings must be made on the system by the superuser or administrator. For further information about this see the original manufacturer’s documentation or the website <http://www.hitechsys.com> as well as section “Configuring the AViTA Control System” on page 5-11.

### 4.10.2 Avid iNews Command

The Avid iNEWS Command feature allows you to easily connect the VENICE Media Production Hub to an Avid environment especially for news rooms and to carry out playout tasks on the VENICE server acting as a video server by using the iNEWS Command client software. Before you can start working, you have to connect the hardware and make several settings. How to connect the DVS and the Avid hardware and how to make basic configurations in the software is described for the ‘Administrator’ in section “Configuring iNEWS Command” on page 6-25. How to configure the VENICE client software for a playout is described for the ‘Superuser’ in section “Configuring a Playout Project for iNEWS Command” on page 5-10. How to perform a playout using iNEWS Command is described in the following:

- Open the VENICE client software and connect to the video channels as described in section “Connecting to a Video Channel” on page 2-11.



You have to connect to at least two video channels, one inventory channel and one or more playout channel(s). The inventory channel must be the one that is directly connected to the IO-LAN terminal server at the VENICE system (see the VENICE hardware guides).



- Select the respective playout project as described in section “Projects” on page 2-18.
- Set the remote control to **VDCP** and press the remote button as described in section “Remote Mode” on page 4-18 and section “How to Perform a Playout in Remote Mode” on page 4-66.
- Select the clips in the “Avid iNEWS Command client software” and configure the playout as described in the “Avid iNEWS Command Installation and Configuration Guide”.



In the Avid iNEWS Command client software no preview pictures of the clips will be shown.

Now you can start playing out the clips with the VENICE Media Production Hub as a video server. The VENICE device will automatically start the playout in remote mode via remote.

## 4.11 Transforming with the VENICE Server

This section describes shortly the controls and options that are available for a transforming exclusively. The remaining items can be used the same way as already described for the playout and ingest mode (see section “Recording with the VENICE Server” on page 4-22 and section “Playing Out with the VENICE Server” on page 4-56).

### 4.11.1 Transwrapping Engine in VENICE

By eliminating decoding and encoding processes, VENICE maintains the high quality of the source material and saves valuable time, especially in fast media turnaround scenarios. Transwrapping will be used e.g. within head and tail cutting. For this, simply configure a transforming operation as described in section “Performing the Transforming Operation” on page 4-72. If source and target file format are identical, the transwrapping engine in the transform mode will do the work. Supported are all iFrame-only codecs such as XDCAM IMX, DV25, DVCPRO 25/50, DVCPRO HD, AVC-Intra and DNxHD. Supported Long GOP formats are GXF (MPEG-2) and MXF OP-1a (XDCAM HD 422). Truncated GOPs and XDCAM HD 422 as per SMPTE RDD09-2009 will be transcoded, everything else will be transwrapped.



Please note that the resulting files may be incompatible with some decoding systems.

Transwrapping is not supported for batch lists and complete transforming lists.

Due to quality of service of the system the maximum file conversion speed is limited to the following values:

Codec	File Conversion Speed
Sony XDCAM HD 35/50	60 fps
Avid DNxHD 1080i/p	60 fps
Avid DNxHD 720p (220 Mbit/s)	80 fps
DVCPRO HD	60 fps
DVCPRO 50	180 fps
DVCPRO 25/DV25	240 fps
Panasonic AVC-Intra 100/200	30 fps
Panasonic AVC-Intra 50	60 fps
XDCAM IMX 30/40/50	120 fps



If not mentioned otherwise, the file conversion speed is 60 fps.



## 4.11.2 Configuration Options

As with the other operation modes, before a transforming can be performed, you have to set up the operation (see also section “Configuring the Operation Mode” on page 5-3). It has to be performed the same way as for the playout or ingest mode. This section describes the configuration options that are available for a transforming exclusively.

### SOURCE

With the **SOURCE** option you determine the clips that should be transformed/converted. In case **SINGLE CLIP** is selected from the operation switches (see section “Operating Elements” on page 3-15), the selected content can be added to a transforming list:

- Use the button () to append the clips that are selected in the entry fields to the list.

If video and audio are both available, they will appear as linked items in the list. With only a single clip selected, only this item will be added to the list.

- Use the button () to insert the clips that are selected in the entry fields to the list above the item that is currently selected in the list.

If video and audio are both available, they will appear as linked items in the list. With only a single clip selected, only this item will be added to the list.



Further information about lists and how to use them can be found in section “The List Editors” on page 3-27.

### OUTPUT SELECT

With this option you can set the essences that should be converted to the other file format.

### SETTINGS

With this option you can set the file format that the selected clips should be converted to.



Some settings may not be available for the user level ‘User’. In this case you will have to log in as ‘Superuser’ or ‘Administrator’.

### Destination

With this option you determine the storage location of the files to be created.

### 4.11.3 Operating Elements for a Transforming Operation

The operating elements in the transform mode can be used, for example, to play out the items that are currently selected as the source. They perform the same actions as the operating elements in the playout mode (see section “Operating Elements of the Player (Tab VENICE)” on page 4-64) when using the play button (). The following user interface items are available for transforming only:



For the items of a transforming list you can specify different configurations (e.g. file formats) for the transforming. Further information about lists and how to use them can be found in section “The List Editors” on page 3-27.

- You can select between the transforming of a single clip or a transforming list with the operation switches at the top of the operating elements (see section “Using Lists” on page 4-77).
- Use the operation switches () , () or () to determine the transform mode of a transforming list.

If set to **SINGLE CLIP**, the selected clip in the transforming list will be transformed. If set to **LIST BATCH**, separate files will be created for the clip items on the list. For this you can specify different configurations (e.g. file formats) for the individual items to be created. If selecting **LIST COMPLETE**, all clips of the transforming list will be transformed into a single file.

- Start the operation with the button () once your transforming is set up correctly.

Then it changes its appearance to its active state and the transforming begins.

- To terminate the transforming manually, click the ‘transform’ button again.



## 4.12 Performing the Transforming Operation

In the transform mode (see section “Selecting an Operation Mode” on page 4-14) you can play out the currently selected content and convert it to a different file format. To start a transforming, perform the steps as described below:



QuickTime closed caption information will be lost when transformed into another file format (e.g. MXF). For further information see section “Supported File Formats” on page A-4.

Video channel tabs can be preconfigured for certain tasks via e.g. project files or presets. Then it may not be necessary to perform all the configurations described below (see section “Preconfiguring the VENICE Client Software” on page 5-3). This has to be made by the ‘Superuser’.

- Select the video and audio content that should be transformed with the **SOURCE** option as described in section “Selecting Content for Payout” on page 4-57.
- Determine a file name and path for the file(s) to be created with the **DESTINATION** option as described in section “Selecting the Storage Location and File Name” on page 4-24.
- If necessary, specify the essences for the transforming with the **OUTPUT SELECT** option (see section “Selecting Essences for Payout” on page 4-62).
- If necessary, configure the output format to your requirements with the **OUTPUT SETTINGS** option (see section “Configuring the Output Settings” on page 4-56).
- If wanted, set an in-/outpoint or duration for the content to be transformed (see section “Operating Elements of the Player (Tab VENICE)” on page 4-64).
- If wanted, you can use the play button () of the operation controls to play out the content to be transformed, for example, for a final check.
- Once the payout is stopped, you can start the transforming by pressing the transform button () of the operation controls.

The VENICE server will then start the transforming and as an indication for this, the characters of the greater position field turn red. The video overlay will show you the source that is transformed (without scaling). The area of the scrub/shuttle bar below the video overlay will show you the progress of the transforming in a progress bar:



Figure 4-40: Progress of a transform operation

Once the progress bar reaches 100%, the transforming is finished and the operation will be stopped. You can terminate the transforming manually whenever you want by clicking the transform button again.

## 4.13 AS-11 Support in VENICE

AS-11 is a vendor-neutral file format, based on MXF OP-1a and developed by the AMWA for the delivery of finished program material from producers to broadcast networks. AS-11 shall be used by post production houses, captioning facilities, broadcast networks and stations as well as transmission service providers. Content delivery and file exchange becomes simpler by using one standardized file format, content providers can create one version for delivery rather than many. The DPP (Digital Production Partnership, UK) selected AS-11 as their future contribution format and created a shim according to their needs.

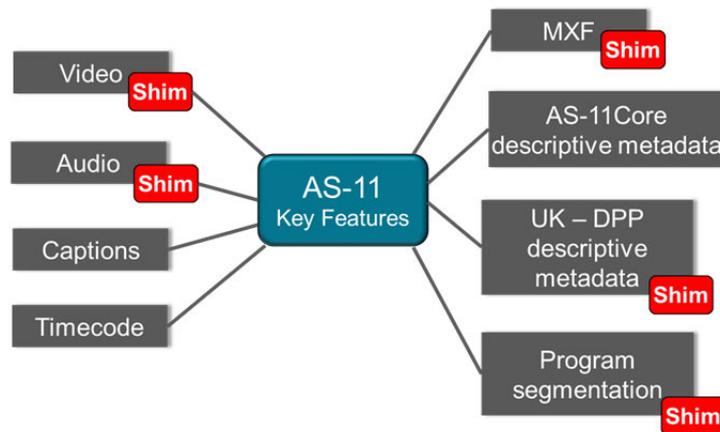


Figure 4-41: AS-11 key features

At the moment AS-11 is mandatory for the UK broadcast market and expected to be used from Q1/2014. The VENICE client software provides read and write support of AS-11 files (DPP shim conform), including comprehensive metadata support with segmentation markers.

### AS-11: Technical Specification

Video coding:

- SD: SMPTE D10, 50 Mbit/s, MPEG-2 4:2:2 P@ML (XDCAM IMX50)
- HD: AVC-Intra Class 100, High Intra 4:2:2 profile level 4

Audio coding:

- SD: One eight-channel AES3 stream
- HD: PCM pairs



Closed captions:

- SMPTE 436M

Beside these basic specifications it is possible for broadcasters to define their own shims that suit their requirements better.

## Opening AS-11 files

AS-11 conform MXF files can be opened. Following the hard segmentation markers in the source file, program and non-program items like ident clock or black video are displayed as separate clips in a playlist. Each segment can be played out or transformed individually into other file formats for further usage. For this you simply have to select the file from the directory window as described in section “Selecting Content for Playout” on page 4-57.

## Working with AS-11 files in the VENICE client software

The VENICE client software provides full support of the AS-11 standard and DPP shims. AS-11 files can be imported (see e.g. section “Selecting Content for Playout” on page 4-57) and all segments are displayed as separate items in playlists or transforming lists as shown in the following figure:



Figure 4-42: AS-11 support in VENICE

Use the AS-11 multi-segment files as a transforming list when switching to transform mode (see section “Selecting an Operation Mode” on page 4-14). You can then transform the list to your purposes (see section “Performing the Transforming Operation” on page 4-72). All specified metadata are supported and XML sidecar metadata files including

the checksum are created, depending on the required shim or the file format.



For further information about the AS-11 standard look at the internet pages from the AMWA (Advanced Media Workflow Association) as well.



## 4.14 Switching between the Tools

When the tab of a video channel is selected, you can find to the right the tool area offering several tools, for example, to administer playlists, batch record lists or transforming lists, or to adapt the streamed audio heard at your workstation. The reference for all lists, configuration options and items for the tool area can be found in chapter “Software Reference” on page 3-1.

The list editors as well as the other available tools can be displayed with the tool tabs at the top of the list editor items (see section “The List Editors” on page 3-27):

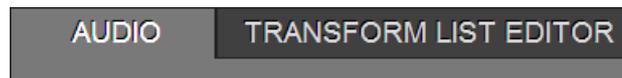


Figure 4-43: Switching between tools

Once a tool has been selected, it will be displayed in the tool area.



The type of list editor that can be selected from this drop-down list depends on the currently activated operation mode (see also section “The List Editors” on page 4-76).

## 4.15 The List Editors

With the list editors you can administer and create playlists, batch record lists or transforming lists. Although the various lists are based on the same format, each list can best be administered in the list editor of its respective operation mode (see section “Selecting an Operation Mode” on page 4-14):



For further information about playlists, batch lists and transforming lists see section “Playlists, Batch Lists and Transforming lists” on page 2-17.

- The playlist editor is available in the **PLAYOUT MODE**.
- The transform list editor is available in the **TRANSFORM MODE**.
- The batch list editor is available in the **INGEST MODE** (after the batch record mode has been selected, see section “Operating Elements of the Recorder (Tab VENICE)” on page 4-29).

AUDIO		PLAYLIST EDITOR		
NEW PLAYLIST				
Duration	Name	Path+File name	Source IN	Source OUT
00:00:24:03	Clip_1	\\media\venice-vol0\IDVS...TENTS\VIDEO\IDVS-Im.MXF	00:00:00:00	00:00:24:03
00:00:06:03	Clip_3	\\media\venice-vol0\IDVS...TENTS\VIDEO\IDVS-Im.MXF	00:00:18:00	00:00:24:03
00:00:19:15	Clip_2	\\media\venice-vol0\IDVS...TENTS\VIDEO\IDVS-Im.MXF	00:00:04:13	00:00:24:03
00:00:34:20	Clip_4	\\media\venice-vol0\IDVS...TENTS\VIDEO\IDVS-Im.MXF	00:00:00:00	00:00:34:20
00:00:24:03	Clip_5	\\media\venice-vol0\IDVS...TENTS\VIDEO\IDVS-Im.MXF	00:00:00:00	00:00:24:03
00:00:15:08	Clip_6	\\media\venice-vol0\IDVS...TENTS\VIDEO\IDVS-Im.MXF	00:00:08:20	00:00:24:03
00:00:13:04	Clip_7	\\media\venice-vol0\IDVS...TENTS\VIDEO\IDVS-Im.MXF	00:00:10:24	00:00:24:03

Figure 4-44: Clip list and list editor items in playout mode

In each operation mode the provided list editor (see section “Switching between the Tools” on page 4-76) offers different functions as well as other columns.

### 4.15.1 Using Lists

Playlists, batch record and transforming lists are interchangeable, meaning they are based on the same format and can be used in all operation modes (see section “Selecting an Operation Mode” on page 4-14).

In the **PLAYOUT MODE** and the **TRANSFORM MODE** you can find switches at the top left of the operating elements where you can specify whether a list should be processed or single video/audio clips:



Figure 4-45: Switching between single clips and playlist/transforming list



In the playout mode you can also determine with a button that only the currently displayed clip of a playlist should be played out (see section “Operating Elements” on page 3-15).

In the batch record mode of the **INGEST MODE** (see section “Operating Elements of the Recorder (Tab VENICE)” on page 4-29) you can select whether the complete list or just the selected items of the list should be processed:



Figure 4-46: Switching between selection and batch record list

Nevertheless, to process a list, it has to be opened and selected in the list editor first (see section “General Administration” on page 4-79).



## 4.15.2 Adding Items to a List

In the **PLAYOUT MODE** and the **TRANSFORM MODE** there are several possibilities to add clips to a list:

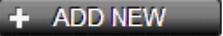
- Single items selected in the **SOURCE** option of the respective operation mode can be either inserted or appended to a list with the buttons to the right of the entry fields:



Figure 4-47: Adding single clips to a list



This way you can also prepare the respective clip beforehand, for example, by determining an in- and outpoint for the selected clip or setting its playout speed.

- Clips can be inserted or appended via a dialog window by using the respective options of the drop-down list 'item settings' in the list editor items. It opens the same window as used, for example, to select content in the playout mode (see section "Selecting Content via a Dialog Window" on page 4-58).
- Clips can be inserted or appended via a dialog window when clicking the 'Add new' button (  ) in the list editor items (see section "The List Editors" on page 3-27). It opens the same window as used, for example, to select content in the playout mode (see section "Selecting Content via a Dialog Window" on page 4-58).
- Clips can be dragged and dropped from Spycer (similar as described in section "Selecting Content Via Spycer" on page 4-60). They can be dropped directly at the wanted position in the clip list area.

In the batch record mode of the **INGEST MODE** you can append the currently set autoedit record operation (tape name, inpoint, outpoint, destination, etc.) to a list with the button **APPEND TO LIST** at the bottom of the operation controls:



Figure 4-48: Adding an item to a batch list

How to set up an autoedit record is described in section “How to Autoedit Record with the VENICE Server” on page 4-33.

### 4.15.3 General Administration

Playlists, batch record and transforming lists can be created and administered with the list editor items. For their respective localization refer to section “The List Editors” on page 3-27:

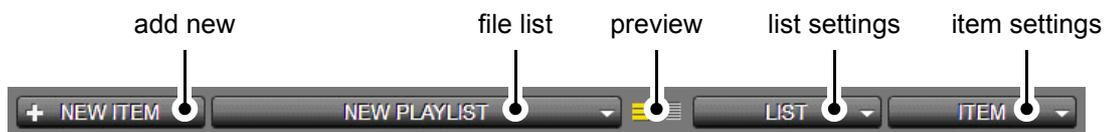


Figure 4-49: List editor items

With the drop-down list ‘file list’ you can select already saved or opened lists by their name. The respective list will then be displayed in the list editor.

With the drop-down list ‘list settings’ the list can be administered. Perform the following:

- For starting a new list select the option **New...**

This will open the window ‘New playlist’ where you can type the list name into the entry field next to **Playlist name**.

- Enter the name of the new list and press the button **OK** or [Enter] on your keyboard.
- To save the list after having configured it select the option **Save...** in the ‘list settings’ drop-down list.

This opens a directory window where you can select the folder your list will be saved in.

- Enter a new name in the entry field **File name** or retain the one that was previously given and select the directory you want to save the list to.



The file ending *\*.vplst* should be selected automatically. After pressing the button **SAVE** or [Enter] on your keyboard the list will be stored locally.

Opening an already stored clip list can be made by clicking on the option **Open...** Afterwards it can be selected from the drop-down list 'file list' to the left.

In the batch list editor you can also open an EDL (edit decision list, types GVG or CMX) or an ALE (Avid Log Exchange) file and import it as a batch list. Any missing information that is required for the batch will be taken from the configuration settings.



When opening a file in the batch list editor, the input video format has to be set to the correct video raster and frame rate.

In the drop-down list 'list settings' you also find possibilities to rename lists with the option **Rename...**, to delete the list with **Delete...** or to delete all lists with **Delete all...** Use the option **Clear** to remove all items from a list. The options **Close** and **Close all** allow you to close the currently displayed clip list or to close all clip lists which will be removed from the 'file list' in a single step.

#### 4.15.4 Administering a List

Once items are available on the clip list, they can be administered and edited in several ways. For example, the sequence of the columns of the table can be changed as well as the sequence of the clips displayed on the list. The clip that is currently displayed in the video overlay is marked in blue.

The list editor items (see section "The List Editors" on page 3-27) provide the possibilities to administer clip lists.

##### Administering a List in the Playout/Transform Mode

With the menu options of the drop-down list 'item settings' to the right of the list editor items, you can e.g. append clips to the list, load clips into the player or delete clips from the list. Perform the following to administer your clip list in the playout and in the transform mode:

- To insert a clip above the item that is currently selected in the list select the option **Insert...**

This will open a directory window where you can select an item that has been stored previously.

- Double-click the respective clip or select it and then press the button **OK**.

The clip will be inserted above the selected item in the list.

The option **Append...** opens a dialog window to append a clip to the list below all clips. Loading a selected clip in the list for a playout in the

main user interface of the VENICE client software can be made by selecting **Load item into player**. To select all items in the currently displayed list choose the option **Select all** and to deselect them choose the option **Remove selection**. The options **Link items** and **Unlink items** give you the possibility to link or separate selected audio and video clips in the list. Deleting a single selected clip or all clips can be carried out by clicking the option **Delete** or **Delete all**.

### Administering a List in the Batch List Editor

To administer your clip list with the drop-down list 'item settings' of the batch list editor perform the following:

- To change the source timecode of a selected clip select the option - **Slide source timecode...**

This will open a dialog window where you can change the in- and out-point independently from one another with offsets:

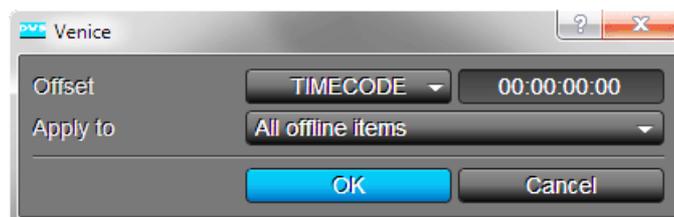


Figure 4-50: 'Slide source timecode' option

- Click into the position field in the line of **Source IN offset** and enter the inpoint.
- Select from the drop-down list **TIMECODE** or **FRAMES**.
- Perform the same for the outpoint and select the items it has to be applied to in the drop-down list to the right of **Apply to**.
- To confirm your settings press the button **OK** or [Enter] on your keyboard.

The settings will be applied to the selected clip and the duration will be changed to the value of the outpoint minus the inpoint.

The options in 'item settings' offer you many more possibilities to e.g. configure and administer your clip list.

- Select all clips with the option **Select all** and delete them from the list by clicking **Delete**.
- Deactivate the blue marking of an item in the list by selecting **Deactivate active item**.

Changes made in the configuration settings will not be applied to the item anymore.

- Change the source timecode of the selected clip by an offset without changing the duration of an item with the option **Slip source timecode**.



- Set a selected clip to 'OFFLINE' by selecting the option **Set to offline**.

Clips marked as 'ONLINE' are already captured and linked to video/audio material. Clips that have not been captured so far or where source material could not be found are marked as 'OFFLINE'.

### Configuring the Appearance of the Clip List

With the 'preview' switches you can adapt the appearance of the clips in the list to your liking in all operation modes the same way. The 'preview' switches are displayed in the respective color of the set operation mode. Perform the following:

- Switch on the thumbnail view with the thumbnail view switch .

This will display a further column in the list that shows the first frame of the item as a thumbnail.

- Switch to the text view without thumbnails by clicking the text view switch .

It is also possible to adjust the width and position of the columns in the clip list. Perform the following:

- Change the position of the column via drag 'n' drop by clicking on the column heading and dragging it to the left or right on to the wanted position.
- Change the width of a column by the edge of a column heading to the side until the wanted width is reached.

If you want to change the order of items in a list, perform the following:

- Select a clip by clicking it and then drag 'n' drop it to the wanted position in the clip list.



Before a clip in the list can be relocated, it has to be selected first. This way unintentional drag 'n' drop operations are prevented.

## 4.15.5 The Context Menus

For additional configuration and editing there are context menus available. They are explained in this section.

### Context Menu of Clips (Playlist/Transforming List Editor)

The context menu invoked on a clip in the playlist or transforming list provides further possibilities to administer and edit the items on a list.

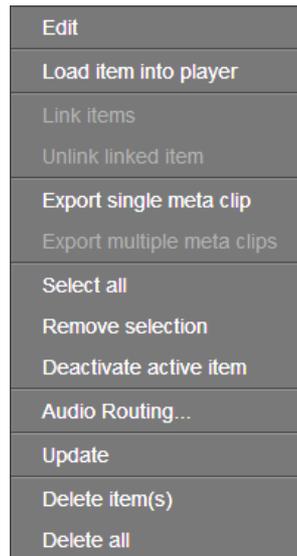


Figure 4-51: Context menu of a list item in the playlist/transforming list editor

Several of these menu options can also be found on the menu of the drop-down list 'item settings' of the playlist or transforming list editor (see section "Administering a List" on page 4-80). They are named similar and provide the same functionality. The following table explains the ones that can be found on the context menu only:

<b>Edit</b>	If available, this menu option allows you to edit the respective field where the context menu has been invoked in the list directly. Alternatively you can set the focus to this field and use the keyboard shortcut [F2].
<b>Export single meta clip</b>	Exports the selected item(s) as a single metaclip. They will be detailed in the metaclip in the same sequence as they are present in the list.
<b>Export multiple meta clips</b>	For each of the selected items a single metaclip will be created.
<b>Update</b>	Updates the list, e.g. the presence of the items on the storage will be checked and their thumbnails will be updated.



## Context Menu of List Items (Batch List Editor)

The context menu invoked on a clip of the batch list editor provides further possibilities to administer and edit the items on a list.

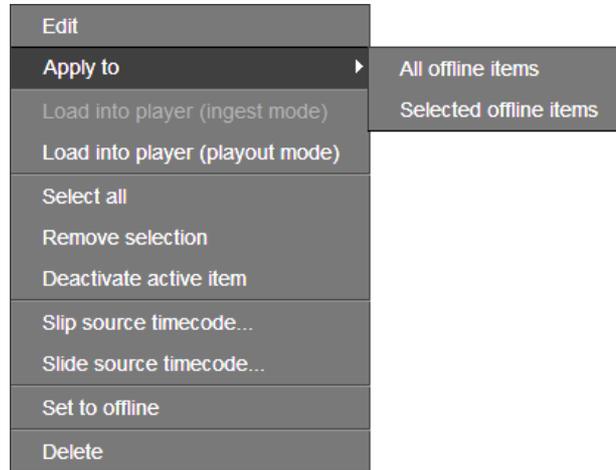


Figure 4-52: Context menu of a list item in the batch list editor

Several of these menu options can also be found on the menu of the drop-down list 'item settings' of the batch list editor (see section "Administering a List" on page 4-80). They are named similar and provide the same functionality. The following table explains the ones that can be found on the context menu only:

<b>Edit</b>	If available, this menu option allows you to edit the respective field where the context menu has been invoked in the list directly. Alternatively you can set the focus to this field and use the keyboard shortcut [F2].
<b>Apply to</b>	Applies the value of a field to other offline items in the list. You can select between all offline items or the selected offline items only.
<b>Load into player (ingest mode) / Load into player (playout mode)</b>	Loads the item where the context menu has been invoked into the player of the respective operation mode. Offline items can be loaded in the player controls of the <b>INGEST MODE</b> (i.e. for the external device) and online items in the player controls of the <b>PLAYOUT MODE</b> (play-out mode will be automatically activated).

## Context Menu of Column Headings

With the context menu invoked on a column heading you can adapt the table, i.e. select the columns that should be displayed.



Figure 4-53: Context menu of a column heading

The columns that can be displayed for the list depend on the type of list editor that is currently active. Select or deselect the columns that should be displayed for the list. The sequence of the columns can be changed via drag 'n' drop.



## 4.16 Audio Monitoring

When playing out with the VENICE client software, the audio is streamed via network to the client where the VENICE client software is installed. The audio monitoring tool (see section “Switching between the Tools” on page 4-76) allows you to adapt the streamed audio that can be heard at your workstation to your liking.

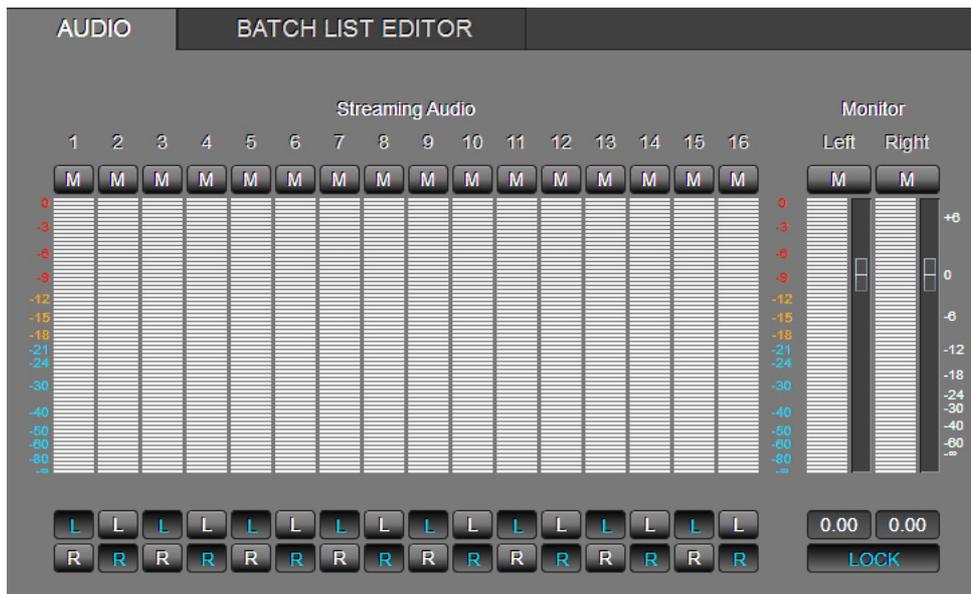


Figure 4-54: Audio monitoring tool

This section describes the audio monitoring tool in detail. Information about this can be found in section “The Audio Monitoring Tool” on page 3-25, too.



If the VENICE client software is installed on a remote system, the Spycer application running there should be fully licensed. Otherwise the data streamed to the remote system will not be bandwidth optimized and audio will not be available.

### Using the Audio Monitoring Tool

The peakmeter of the audio monitoring tool shows you the streamed audio graphically. It indicates the 16 channels of audio that the video channel can provide.

With the **M** button () at the top of each channel peakmeter the channel can be muted. The **L** ( ) and **R** ( ) buttons at the bottom indicate where the channel will be routed to at your workstation (left or right):

Button L	Button R	Result
activated	deactivated	left channel
deactivated	activated	right channel
activated	activated	left and right channel (mono)
deactivated	deactivated	mute

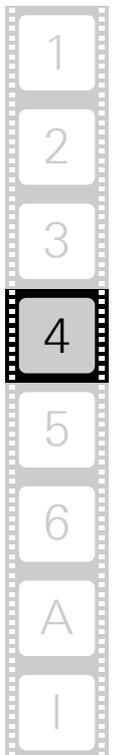
The volume that can be heard at your workstation can be controlled with the **MONITOR** items to the right:

- Mute either the left or the right channels that will then be heard at your workstation with the 'mute' button (  ).
- To adjust the volume of the audio with the mouse use the slider. For this you can also use the scroll wheel with the mouse cursor placed over a slider.

The slider steps made with the scroll wheel can be adjusted by pressing the [Shift], [Ctrl] or [Alt] key simultaneously.

- The volume can also be adjusted by entering a value in the entry fields (  ) below the **MONITOR** items.

When the (  ) button is activated, the volume controls of the left and right channel are locked together and they will both be adjusted simultaneously. If deactivated, the left and right channel can be adjusted individually.





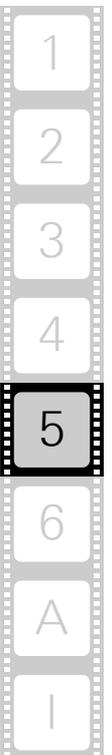
## Level Superuser



The 'Superuser' has all user rights and therefore access to all software features of the 'User' (see section "User Level Management" on page 2-5 and chapter "Level User" on page 4-1) as well as several more possibilities as preconfiguring e.g. layouts or make settings in the **Configuration...** menu of the main menu **Options**.

The 'Superuser' can then, e.g. create projects (see section "Projects" on page 2-18) and scenarios (see section "Scenarios" on page 2-18), save them to a location at will and the 'User' would select them to perform his tasks.

How to configure record, playout and transforming tasks as well as how to make further configurations of the software is described in this chapter.



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## 5.1 Preconfiguring the VENICE Client Software

The VENICE client software can be preconfigured for often recurring tasks so that operators are not required to do this time and again during their work. It is up to the management/administrator to decide how detailed this preconfiguration should be. Some configurations can only be made by the 'Superuser', like the configuration of record/file ingest, playout and transform tasks. The features of the button **EDIT** in the option **SETTINGS** of the configuration options (see section "Configuration Options" on page 3-18) is only available from user level 'Superuser' and higher.

The VENICE client software offers various options and settings that can be used for a preconfiguration and they are described in this section. All files can be saved and loaded whenever required.

### 5.1.1 Configuring the Operation Mode

Prior to performing an operation with VENICE you have to configure the selected operation mode. The configuration options in the respective operation modes can be found at the bottom of the user interface (see section "Configuration Options" on page 3-18).

When the configuration options are collapsed, the button **AUTODETECT** (when in ingest mode) and the drop-down list **Preset** are still available. With a click on the buttons showing a triangle to the right the respective configuration options can be expanded or collapsed.

Via the context menu invoked on a triangle button all options can be expanded or collapsed in a single step (depending on the state of the triangle button). See also the options **Show all settings** and **Hide all settings** in the menu **Options** (section "The 'Options' Menu" on page 3-5).



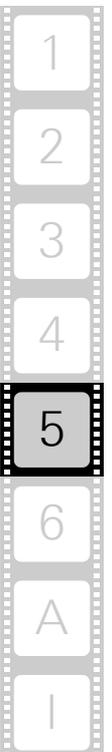
Figure 5-1: Context menu to show/hide all configuration options

- Use the configuration options to configure the selected operation mode.



Further information about this can be found in section "Configuring a Record" on page 5-4, section "Configuring a Playout" on page 5-8 or section "Configuring a Transforming Operation" on page 5-12.

Once the selected operation mode is preconfigured properly, you can save all settings as a project or scenario (see section "Basic File Types" on page 2-16) for the 'User' to select it later or start using the video channel of the VENICE server.



## 5.1.2 Configuring a Record

Before a record can be performed with the connected video channel of the VENICE server, you have to set up the record and the input related settings (see also section “Configuring the Operation Mode” on page 5-3). As a minimum you have to determine the location of the record. This section describes the necessary settings that have to be made before capturing with the VENICE server.



Video channel tabs can be preconfigured for certain tasks via e.g. project files or presets. Then it may not be necessary to perform all the configurations described below (see section “Preconfiguring the VENICE Client Software” on page 5-3).

### Configuring the Input Settings

To record video and audio with the VENICE server, you have to configure the input format appropriately via the option **SETTINGS** (see section “Configuration Options” on page 3-18). When you press the button **EDIT** to the right of the **Input Video** field, a window containing all available input settings will open:

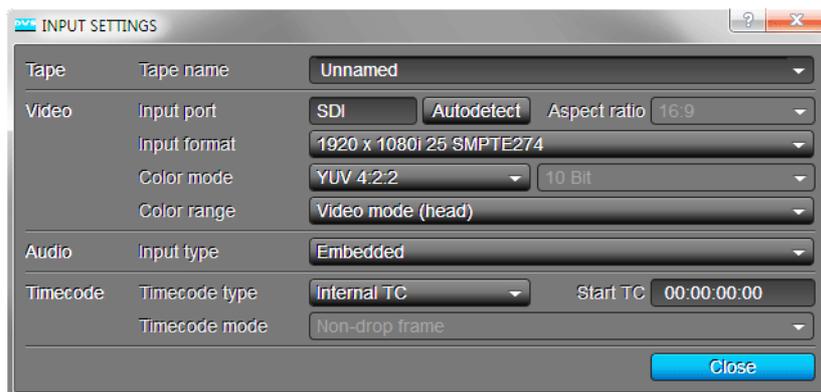


Figure 5-2: The ‘Input Settings’ window



Between the operation modes of the VENICE server (see section “Selecting an Operation Mode” on page 4-14) different video format configurations can be set (see section “Configuring the Output Settings” on page 4-56).

The input video raster has to match the incoming signal, i.e. the set video raster for the input must be of the same raster as the incoming signal.

With the options of the **‘INPUT SETTINGS’** window you can configure the input video format so that it matches the incoming video signal. You may also use the **AUTODETECT** button to let the VENICE server detect the video format of the input signal automatically. Each time the ingest

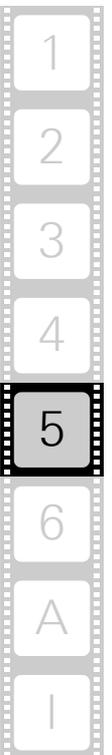
mode is activated, an autodetect is performed automatically. The following tape and video settings are available:

<b>Tape name</b>	Specifies the name of the tape (reel) for the video material to be recorded. Its entry will be saved as metadata for your clip and written into the file headers of the recorded files (if supported by the file format). Furthermore, this information will be used during a batch record to indicate different sources/tapes.
<b>Input port</b>	Indicates the input port of the video channel.
<b>Aspect ratio</b>	Details and, if possible, allows to set the aspect ratio of the video raster.
<b>Input format</b>	Specifies the video raster, field mode and frame rate.
<b>Color mode</b>	Determines the color space (e.g. YUV or RGB), the sampling frequencies (e.g. 4:4:4) and the color bit depth (e.g. 10 bit).
<b>Color range</b>	Specifies the color space range of the input, i.e. whether it is in a restricted (head) or in a full value range (full). YUV material usually is in a restricted value range (e.g. 16 to 235 for 8 bit), while RGB is in the full value range (e.g. 0 to 255).

Once set, the respective format will be automatically applied to the appropriate input port(s) of the VENICE server as well as to the video overlay of the VENICE client software. Afterwards some of the file formats for a capturing may not be available anymore due to the selected video raster or color space.

Furthermore, with the options of the **'INPUT SETTINGS'** window you can determine the audio input and timecode settings for the record:

<b>Input type</b>	Determines the audio input, i.e. whether audio embedded in video (AIV) or the signal that is present at the digital audio inputs should be recorded.
<b>Timecode type</b>	Determines the type of timecode that should be written as the generic source timecode into the files' headers (if supported by the file format, see also section "About Source Timecode" on page 2-23).
<b>Start TC</b>	Specifies a timecode offset for the internal timecode.
<b>Timecode mode</b>	Specifies if drop-frame timecode should be applied to the internal timecode (for 29.97 Hz timecodes).





The input video format has to match the incoming signal, i.e. it must be of the same format and raster as the incoming signal.

### Configuring the Output Settings (File Settings)

With the options of the 'OUTPUT SETTINGS' window (see section "Configuration Options" on page 3-18) you determine the file format(s) of the file(s) to be recorded. When you press the button **EDIT** to the right of the **Output Settings** field, a window containing all available output settings will open:

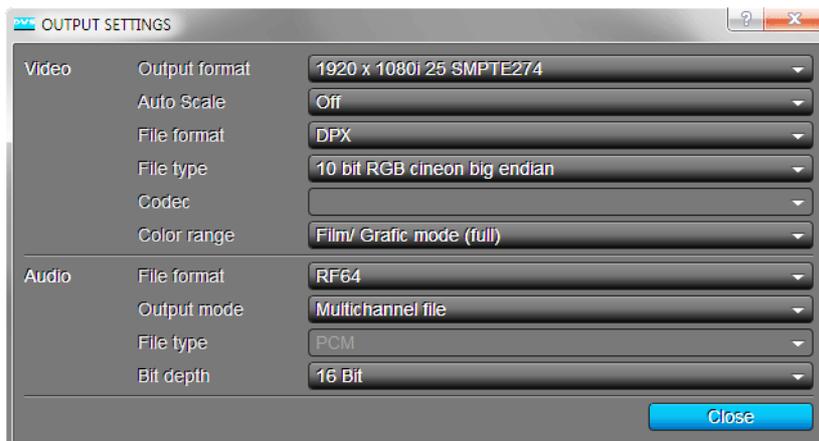


Figure 5-3: The 'Output Settings' window



These settings are connected to the input settings. Some of the file formats may not be available due to the selected input video format.

Whether the **Output format** and **Auto scale** settings are available depend on the hardware of the VENICE server.

- Use the drop-down lists under **Video file settings** to set the format for image/video file(s):

<b>Output format</b>	Determines the video raster, field mode and frame rate.
<b>Auto scale</b>	Enables you to scale and resize the video material if output format (file settings) and input format are different.
<b>File format</b>	Sets the file format (see also section "States of an External Device" on page A-10).
<b>File type</b>	Details and, if possible, allows to set codec or file type for the selected file format (to determine bit depth and/or byte order settings).
<b>Codec</b>	For compressed file formats: Determines the type of compression.

<b>Color range</b>	Specifies the color space range of the files, i.e. whether they will be in a restricted (head) or in a full value range (full). YUV material usually is in a restricted value range (e.g. 16 to 235 for 8 bit), while RGB is in the full value range (e.g. 0 to 255).
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Under **Audio file settings** you can specify the file format for the audio file(s) further:



Whether these settings are available depend on the selected file format.

Further information about audio and the way it is handled can be found in section "About Source Timecode" on page 2-23, in section "Audio Routing" on page 4-16 or in section "Audio Monitoring" on page 4-86.

<b>File format</b>	Sets the file format (see also section "States of an External Device" on page A-10).
<b>Output mode</b>	Determines the output format of the audio files, i.e. whether they are stored as individual mono files or a single file containing multiple channels.
<b>File type</b>	Details the file type for the selected file format.
<b>Bit depth</b>	Specifies the resolution (bit depth) of the audio files.

All configurations can then be stored in project files or scenarios as described in section "Basic File Types" on page 2-16. How to record the configured clip is described in section "Recording with the VENICE Server" on page 4-22.



The output signal that is given out during a record operation is handled internally as a process of a lower priority to ensure flawless ingests in a high variety of video/file formats. In the signal that is provided at the output during a record drops may occur and audio as well as timecode are omitted.



### 5.1.3 Configuring a Playout

Prior to playing out clips with the VENICE server, you have to set up the playout and configure output related settings (see also section “Configuring the Operation Mode” on page 5-3). As a minimum you have to select content for a playout. This section describes the necessary settings that have to be made before playing out clips with the VENICE server.



Video channel tabs can be preconfigured for certain tasks via e.g. project files or presets. Then it may not be necessary to perform all the configurations described below. You can simply select a preset or a scenario file from the respective list (see section “Basic File Types” on page 2-16).

#### Configuring the Output Settings

To play out video and audio, you have to configure the output format appropriately via the option **SETTINGS** in the configuration options (see section “Configuration Options” on page 3-18). When you press the button **EDIT** to the right of the configuration options, a window containing all available output settings will open:

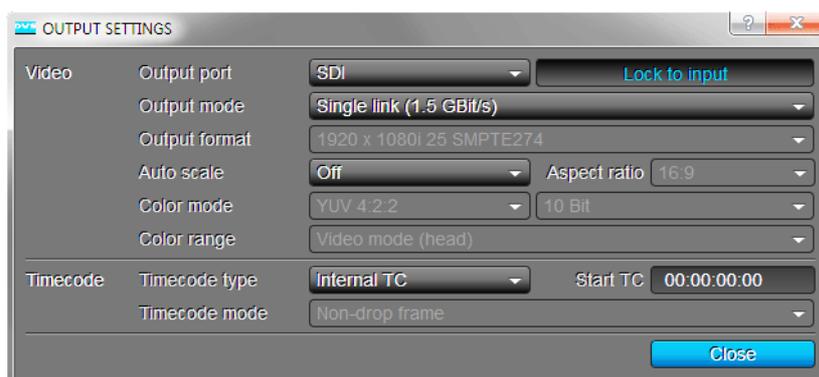


Figure 5-4: The ‘Output Settings’ window

By default the output settings are linked to the video format set for the playout mode (button **LOCK TO INPUT** activated).

However, between the operation modes of the DVS software (see section “Selecting an Operation Mode” on page 4-14) different video format configurations can be set. They will be applied to the connected video channel and available in each operation mode:

- In the playout mode you can determine the signal output (via the output settings), and
- in the ingest mode the signal input is configured (via the input settings, see section “Configuring the Input Settings” on page 5-4).

When the button **LOCK TO INPUT** is deactivated, you can change the output video format.



To view the signal of the external device in the video overlay of the playout mode, e.g. to check the position of a connected VTR, the input format of the ingest mode must be configured appropriately (see section “Configuring the Input Settings” on page 5-4).

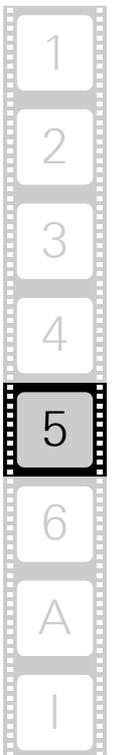
Whether the **SDI output mode** and **Auto scale** settings are available depend on the hardware of the VENICE server.

With the options of the '**OUTPUT SETTINGS**' window you can configure the output video format according to your needs:

<b>Output port</b>	Determines the output port of the video channel.
<b>Output mode</b>	Configures the speed of the SDI output (1.5 Gbit/s, 3.0 Gbit/s, or dual link).
<b>Output format</b>	Specifies the video raster, field mode and frame rate.
<b>Auto scale</b>	Enables you to scale and resize the video material if output format and the format of the video material are different. For further details see section “Configuration Options” on page 4-70.
<b>Aspect ratio</b>	Details and, if possible, allows to set the aspect ratio of the video raster.
<b>Color mode</b>	Determines the color space (e.g. YUV or RGB), the sampling frequencies (e.g. 4:4:4) and the color bit depth (e.g. 10 bit).
<b>Color range</b>	Specifies the color space range of the output, i.e. whether it is in a restricted (head) or in a full value range (full). YUV material usually is in a restricted value range (e.g. 16 to 235 for 8 bit), while RGB is in the full value range (e.g. 0 to 255).

Once set, the respective format will be automatically applied to the appropriate output port(s) of the connected video channel. Additionally, the video overlay would change its format (e.g. its aspect ratio, see section “The Scrub Bar / Shuttle Bar” on page 3-22).

Furthermore, with the options of the '**OUTPUT SETTINGS**' window you can determine the timecode settings for the playout:



<b>Timecode type</b>	Determines the timecode type, i.e. whether an internal timecode or the source timecode provided by the files should be used (see also section "About Source Timecode" on page 2-23).
<b>Start TC</b>	Specifies a timecode offset for the internal timecode.
<b>Timecode mode</b>	Specifies if drop-frame timecode should be applied to the internal timecode (for 29.97 Hz timecodes).

All configurations can then be stored in project files or scenarios as described in section "Basic File Types" on page 2-16. How to play out the configured clip is described in section "Playing Out with the VENICE Server" on page 4-56.

#### 5.1.4 Configuring a Playout Project for iNEWS Command

The Avid iNEWS Command feature allows you to easily connect the VENICE Media Production Hub to an Avid environment especially for news rooms and to carry out playout tasks on the VENICE server acting as a video server by using the iNEWS Command client software. Before you can start working, you have to connect the hardware and make several settings. How to connect the DVS and the Avid hardware and how to make basic configurations in the software is described for the 'Administrator' in section "Configuring iNEWS Command" on page 6-25. How to perform a playout using iNEWS Command is described for the 'User' in section "Avid iNews Command" on page 4-67. How to configure the VENICE client software for a playout is described in this section.

When the DVS and Avid hardware is connected and all basic software settings are made as described in the documentation by Avid, you can configure a playout project for iNEWS Command. Perform the following:

- Open the VENICE client software and connect to the video channels as described in section "Connecting to a Video Channel" on page 2-11.



You have to connect to at least two video channels, one inventory channel and one or more playout channel(s). The inventory channel must be the one that is directly connected to the IO-LAN terminal server at the VENICE system (see the VENICE hardware guides).

- Select or configure a new playout project as described in section “Projects” on page 2-18 and section “Configuring a Playout” on page 5-8.

When configuring a new project, perform the following:

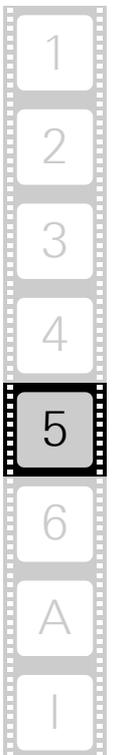
- Navigate to the menu **Configuration...** of the **Options** menu or press [F4] on your keyboard to open it. Further information about the menu **Configuration...** can be found in section “Configuration” on page 5-15.
- Select the group **VDCP**.
- Set the **Root path** to the VDCP root folder.
- Activate the check boxes **Simplify clip name** and **Show first cued frame**.
- Confirm by pressing the button **OK**.

Now you can configure the playout as wanted (see section “Configuring a Playout” on page 5-8) and save it as e.g. project file (see section “Basic File Types” on page 2-16). With this all configurations will be made and the ‘User’ will be able to select the project file to perform the playout tasks later (see section “Avid iNews Command” on page 4-67).

### 5.1.5 Configuring the AViTA Control System

With the production control system AViTA by HiTech you can perform ingest and playout operations on the VENICE server via the VDCP protocol. How to set the remote mode and select the protocol is described in section “How to Generally Play Out in Remote Mode” on page 4-66. How to set up the AViTA system is described in the original manufacturer’s documentation or on the website <http://www.hitechsys.com>. The following settings must be made additionally to the setup:

- A minimum preroll value is required for a reliable loading of clips in non-automation mode. It is recommended to try 5 frames first (default value is 0 frames) in the **Minimum preroll** setting in the AViTA server settings.
- When loading cues or clips that have been trimmed, the **Zero-based clip offset** switch in the AViTA server settings should be set to **ON**. This only applies to clips that have been recorded with zero start time.



## 5.1.6 Configuring a Transforming Operation

Prior to transforming clips with the VENICE server, you have to set up the transforming and configure output related settings (see also section “Configuring the Operation Mode” on page 5-3). As a minimum you have to select content for a transforming operation. This section describes the necessary settings that have to be made before transforming clips with the VENICE server.



Video channel tabs can be preconfigured for certain tasks via e.g. project files or presets. Then it may not be necessary to perform all the configurations described below. You can simply select a preset or a scenario file from the respective list (see section “Basic File Types” on page 2-16).

### Configuring the Output Settings

To transform video and audio to other file formats, you have to configure the output format appropriately via the option **SETTINGS** in the configuration options (see section “Configuration Options” on page 3-18). When you press the button **EDIT** to the right of the configuration options, a window containing all available output settings will open:

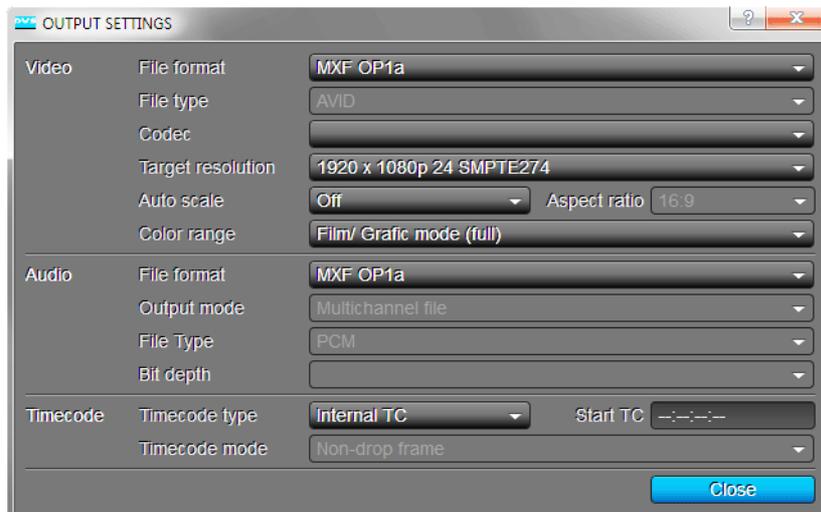


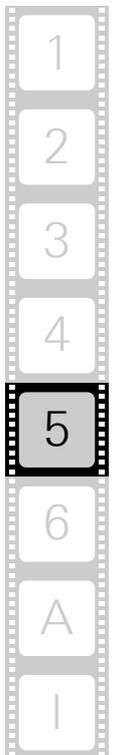
Figure 5-5: The ‘Output Settings’ window

Between the operation modes of the DVS software (see section “Selecting an Operation Mode” on page 4-14) different video format configurations can be set. They will be applied to the connected video channel and available in each operation mode.

With the options of the '**OUTPUT SETTINGS**' window you can configure the output video format according to your needs:

<b>File format</b>	Sets the file format (see also section "States of an External Device" on page A-10).
<b>File type</b>	Details the file type for the selected file format.
<b>Codec</b>	For compressed file formats: Determines the type of compression.
<b>Target resolution</b>	Configures the video raster that the target video clip should provide.
<b>Auto scale</b>	<p>Enables you to scale and resize the video material if output format and the format of the video material are different. For further details see section "Configuration Options" on page 4-70.</p> <ul style="list-style-type: none"> <li>– With the drop-down list <b>Auto scale</b> set to <b>Fit</b> the original material will be scaled to its maximum allowable width or height so that no information gets lost. If the aspect ratio is different, you will receive black bars in the target files.</li> <li>– With this drop-down list set to <b>Crop</b> the images will be scaled to their maximum allowable width or height so that you receive a full image at the output. If the aspect ratio is different, parts of the images will be cropped.</li> <li>– With the drop-down list <b>Auto scale</b> set to <b>Box</b>, the aspect ratio will not be preserved. The resulting images will be stretched or compressed if the aspect ratio is different and you will always receive a full image in the target files.</li> <li>– With the <b>Auto scale</b> drop-down list set to <b>Off</b>, the material will maintain its original size.</li> </ul>
<b>Aspect ratio</b>	Details and, if possible, allows to set the aspect ratio of the video raster.
<b>Color range</b>	Specifies the color space range of the output, i.e. whether it is in a restricted (head) or in a full value range (full). YUV material usually is in a restricted value range (e.g. 16 to 235 for 8 bit), while RGB is in the full value range (e.g. 0 to 255).

Once set, the respective format will be automatically applied to the appropriate output port(s) of the connected video channel. Additionally, the video overlay will change its format (e.g. its aspect ratio, see section "The Scrub Bar / Shuttle Bar" on page 3-22).



Furthermore, with the options of the '**OUTPUT SETTINGS**' window you can determine the audio and timecode settings for the transforming:

<b>File format</b>	Sets the file format (see also section "States of an External Device" on page A-10).
<b>Output mode</b>	Configures the speed of the SDI output (1.5 Gbit/s, 3.0 Gbit/s, or dual link).
<b>File type</b>	Details the file type for the selected file format.
<b>Bit depth</b>	Specifies the resolution (bit depth) of the audio files.
<b>Timecode type</b>	Determines the timecode type, i.e. whether an internal timecode or the source timecode provided by the files should be used (see also section "About Source Timecode" on page 2-23).
<b>Start TC</b>	Specifies a timecode offset for the internal timecode.
<b>Timecode mode</b>	Specifies if drop-frame timecode should be applied to the internal timecode (for 29.97 Hz timecodes).

All configurations can then be stored in project files or scenarios as described in section "Basic File Types" on page 2-16. How to transform the configured clip is described in section "Performing the Transforming Operation" on page 4-72.

## 5.2 Configuration

Configurations can be made in various places in the VENICE client software. Often these are individual configurations made while working with the software like e.g. format, timecode or color modes. Basic settings have effect on the whole user interface and its behavior or on the server and can be made in the menu **Options**.

Via the menu option **Configuration...** of the menu **Options** several basic configurations can be set that will be saved to the e.g. project or scenario file. Via the menu option **Server Configuration...** several server configurations can be set. Because of its importance for the workflow the menu option **Configuration...** will be described in detail in the following. The option **Server Configuration...** will be detailed in chapter "Level Administrator" on page 6-1 since it is only available for the administrator.

When a video channel tab is selected and displayed in the user interface, select the menu option **Configuration...** from the **Options** menu to change the settings for this video channel. You can also use the shortcut [F4] to open it. The following window will be shown:

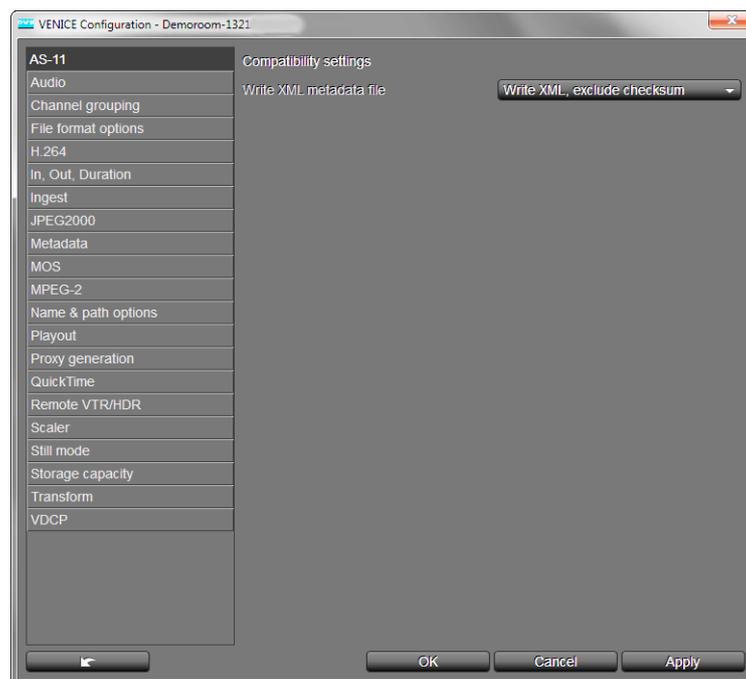


Figure 5-6: Configuration option in the menu 'Options'

The available groups of configurations can be found to the left. Once an entry is selected, the settings sorted under it will be shown in the settings pane to the right. Then they can be adjusted.

When everything is set as wanted, you can apply them by using the button **APPLY** at the bottom right of the window. The button **RESET TO DEFAULT** resets all configurations back to their default values.

## 5.2.1 AS-11

With the group AS-11 you can configure the metadata for the AS-11 files. Further information about the AS-11 support in VENICE can be found in section “AS-11 Support in VENICE” on page 4-73.

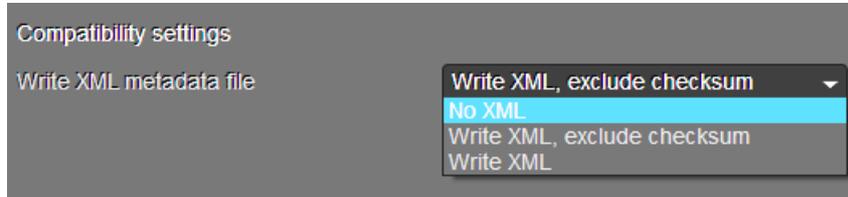


Figure 5-7: AS-11 metadata settings

It provides the following items:

<b>Write XML metadata file</b>	Depending on the selected item from the drop-down list no XML file is written ( <b>No XML</b> ) when writing AS-11 files with the VENICE client software, an XML file is written but no checksums are included ( <b>Write XML, exclude checksum</b> ) or an XML file is written including the checksum ( <b>Write XML</b> ).
--------------------------------	--

## 5.2.2 Audio

With the **Audio** settings you can configure the digital to analog audio conversion for monitoring audio.



Figure 5-8: Settings for audio monitoring

It provides the following item:

<b>dBFS for audio monitoring</b>	Configures the decibels relative to the full-scale level for the <b>MONITOR OUT</b> peakmeter of the audio monitoring tool.
----------------------------------	---

### 5.2.3 Channel Grouping

With the **Channel grouping** settings you can set the VENICE server into a multi-device operation mode (see also section “Channel Groups” on page 4-5).

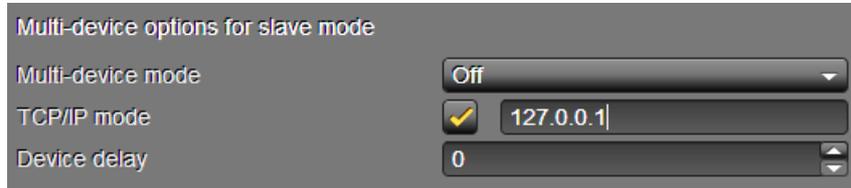
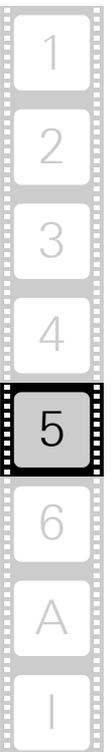


Figure 5-9: Settings for a channel group

It provides the following items:

<b>Multi-device mode</b>	Sets the role for the connected channel, i.e. whether it should act as remote or master. For the remote role you can also select timecode chasing.
<b>TCP/IP mode</b>	If an Ethernet connection should be used, activate this check box and specify the IP address of the channel that should be used as the reference channel with the drop-down list to the right. If the check box is deactivated, an RS-422 connection is used.
<b>Device delay</b>	Sets a delay for the video channel (in frames), i.e. a delay until it will react to commands.
<b>Timecode chase offset</b> (in the remote mode)	If one of the remote roles has been selected for the video channel, this entry field will be available. With it you set the offset for the timecode chasing (in frames). The edit lag of VENICE will be observed as well (see section “RS-422 Control” on page A-9).



### 5.2.4 File Format Options

The file formats BMP, TGA and TIFF usually carry no metadata about whether the material is progressive or interlaced. The **File Format Options** offer you the possibility to define the image settings of the material to be played out or transformed.

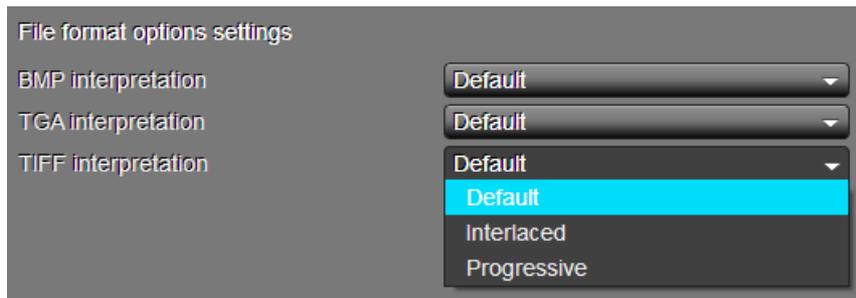


Figure 5-10: Options to set the file format

It provides the following items:

<b>BMP interpretation</b>	Offers a drop-down list with the options <b>Interlaced</b> , <b>Progressive</b> and <b>Default</b> to define the material in BMP format. The option <b>Default</b> depends on the resolution of the video material.
<b>TGA interpretation</b>	Same as <b>BMP interpretation</b> only for TGA files
<b>TIFF interpretation</b>	Same as <b>BMP interpretation</b> only for TIFF files

### 5.2.5 H.264 (AVC/MPEG-4 Layer 10)

H.264 is one of the standard delivery format for web-based content. Due to its quality with low bandwidth, it can also be used for high quality content preview. H.264 is available in 4:2:0 and in 4:2:2 color mode, in main and high profile. The bit rate for video and audio is configurable. The container format is MP4. The compression settings can be configured as shown in the figure below.

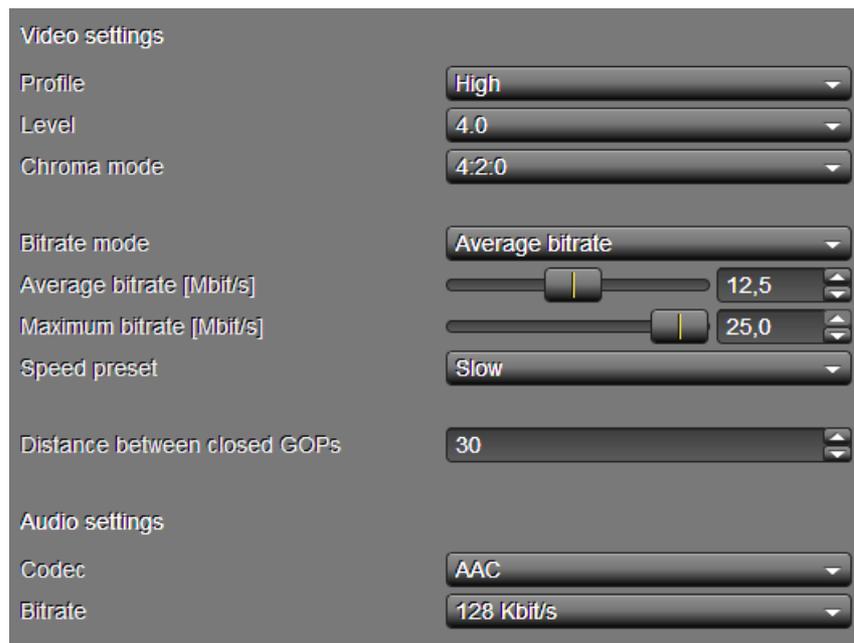


Figure 5-11: Configuring the H.264 settings

## 5.2.6 In, Out, Duration

With the **In, Out, Duration** settings you determine whether the inpoint or outpoint should be changed when altering a duration setting.

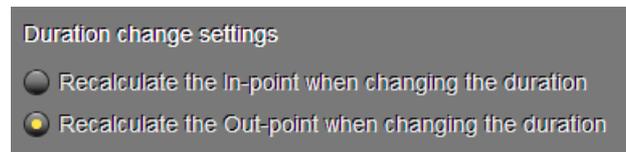


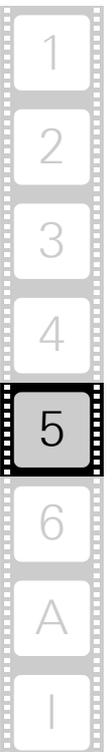
Figure 5-12: In, Out, Duration settings

It provides the following items:

<b>Recalculate the In-point when...</b>	The inpoint is changed when a duration setting is altered in the VENICE client software.
<b>Recalculate the Out-point when...</b>	The outpoint is changed when a duration setting is altered in the VENICE client software.

## 5.2.7 Ingest

For long running program ingest or transforming, it is useful to split the incoming signal into multiple files. Due to this, the recorded or transformed content is stored in several files and not in a single huge file. The VENICE client software offers the option **Ingest** with its features **Split**



on **timecode** and **Split on duration** to define the break points. In the field **Clip chunking** is a drop-down list to be found, where the break points can be set. Furthermore, audio and ingest settings are present in the **Ingest** option.

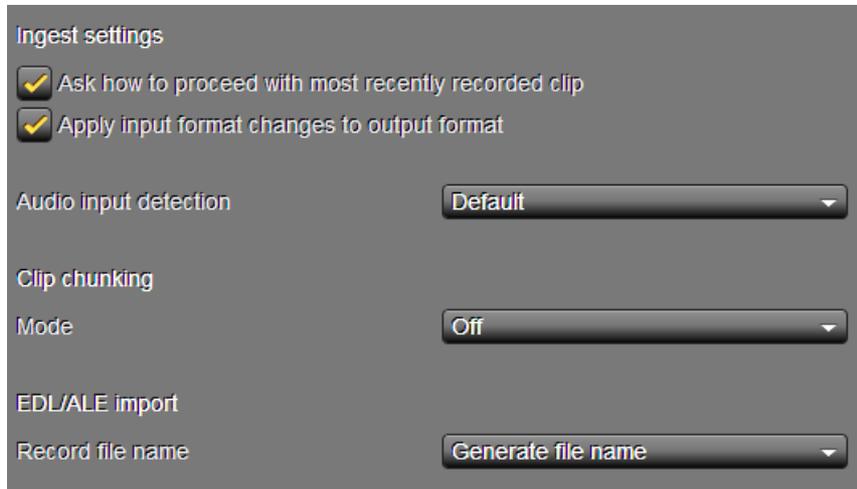


Figure 5-13: Clip chunking

<p><b>Ingest settings</b></p> <p><b>Ask how to proceed with most...</b></p> <p><b>Apply input format changes to...</b></p>	<p>With these drop-down lists and check boxes you can configure the record as wanted.</p> <p>Opens a dialog window after having finished a record operation and asks you whether to save or delete the record file. If this check box is deactivated, the record file will be saved to the designated file automatically.</p> <p>When in ingest or transform mode, an independent input raster is created in the input settings of the configuration options (see section “Configuration Options” on page 3-18), the settings will be applied to the output format automatically.</p>
<p><b>Audio input detection</b></p>	<p>In this drop-down list are audio options for the record to be found. You can choose between default (depending on available SDI-In information), 8 or 16 audio channels. If more audio channels than present at the SDI-In ports are wanted, this option can be used to create additional channels which will then be silent. Further information about audio can be found in section “About Source Timecode” on page 2-23.</p>

<p><b>Clip chunking</b></p> <p><b>Mode</b></p>	<p>Option to split the incoming signal in multiple files. This is useful for long running program ingest.</p> <p>Select whether to split on timecode, split on duration or switch off clip chunking from this drop-down list.</p>
<p><b>EDL/ALE import</b></p> <p><b>Record file name</b></p>	<p>In this option you can define the file name of a batch record.</p> <p>Select from this drop-down list if you would like to adopt the file name of an imported EDL (edit decision list) with the list item <b>Use from EDL/ALE</b> or to generate a new file name with the list item <b>Generate file name</b>.</p>

### 5.2.8 Metadata

The **Metadata** settings allow you to configure the metadata configuration settings available for the ingest mode. The VENICE client software supports all file format dependent metadata like e.g. XDCAM, P2 or Avid Interplay. The metadata option also provides metadata editing for MXF files or metadata export via XML files to e.g. a connected MAM (Media Asset Management) like DVS's Veneto, a content control or data management software like e.g. Spycer.

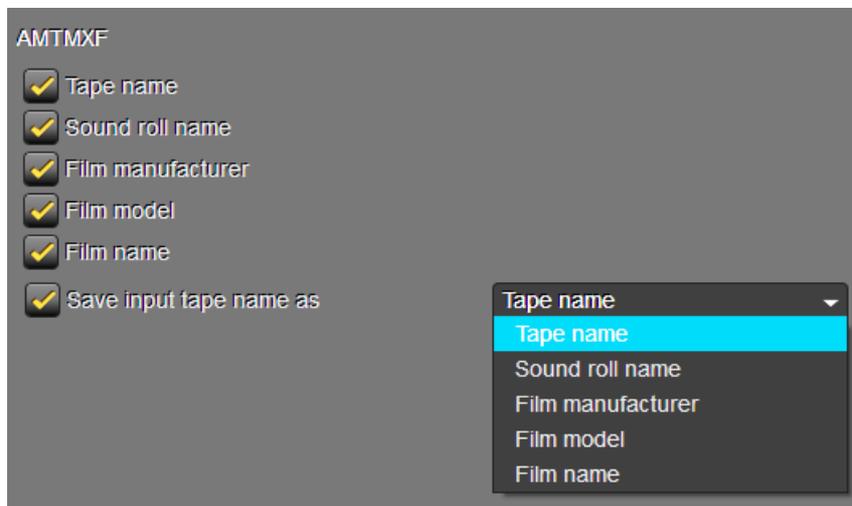


Figure 5-14: Metadata settings

It provides the following items:

<p><b>AMTMXF</b></p>	<p>Configures the <b>METADATA</b> configuration settings when the file format for the Avid workflow is selected.</p>
----------------------	--

check box area	Activates/deactivates the metadata that will be available as settings.
<b>Save input tape name as</b>	Allows you to specify the metadata that should receive the <b>Tape name</b> entry specified under <b>INPUT SETTINGS</b> (ingest mode of the VENICE client software), e.g. if the file format does NOT provide a dedicated tape name metadata. Its entry will be saved in the respective field of the metadata for your clip in the file headers of the recorded files.

### 5.2.9 MOS

MOS is the abbreviation for media object server and is a communication protocol that allows newsroom computer systems (NCS) to exchange information with a MOS-capable video server, such as VENICE, e.g. to play out playlists. The playlist handling allows you to receive run-downs or change items and running order while playing out. The **MOS** settings are used to configure the connection of the video channel via MOS.

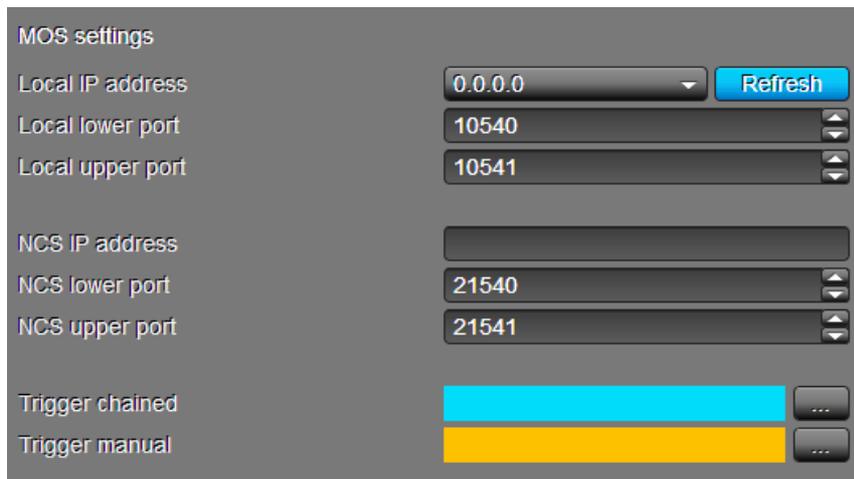


Figure 5-15: MOS settings

It provides the following items:

<b>Local IP address</b>	Select from the drop-down list the IP address that should be used to communicate with the NCS. In case a network connection is inactive (e.g. no cable connected), its IP address will not appear in the drop-down list. Then establish a network connection at the respective connector and click the <b>REFRESH</b> button. This will make the IP address available. 0 . 0 . 0 . 0 will listen on all available network ports.
-------------------------	--

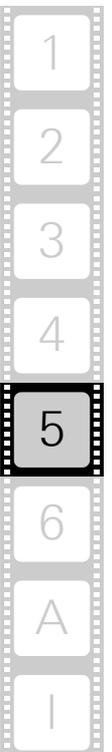
<b>Local lower port</b>	Determines the lower port where VENICE communicates with the NCS. Unless you receive an error it is recommended to keep the default setting.
<b>Local upper port</b>	Determines the upper port where VENICE communicates with the NCS. Unless you receive an error it is recommended to keep the default setting.
<b>NCS IP address</b>	Specifies the IP address of the NCS.
<b>NCS lower port</b>	Determines the lower port of the NCS to communicate with VENICE.
<b>NCS upper port</b>	Determines the upper port of the NCS to communicate with VENICE.
<b>Trigger chained</b>	Sets the color that will be used to show trigger-chained events on the playlist.
<b>Trigger manual</b>	Sets the color that will be used to show trigger-manual events on the playlist.

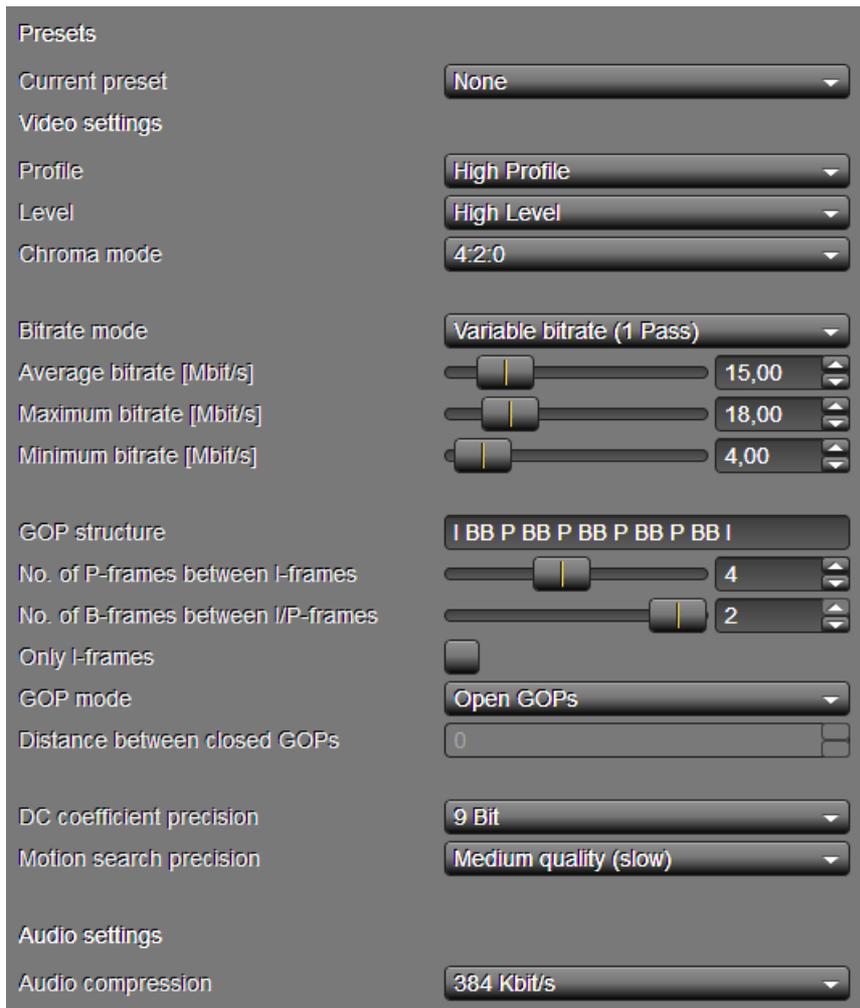


Currently the software supports MOS in its version 2.8.4. profiles 0 and 2.

## 5.2.10 MPEG-2

The MPEG-2 compression settings available for VENICE are the default MPEG settings. Because of this they are not explained further in this manual. Explanations can be found, for example, at <http://www.mpeg.org>. Below you see a picture of these settings in the VENICE client software:





Presets

Current preset: None

Video settings

Profile: High Profile

Level: High Level

Chroma mode: 4:2:0

Bitrate mode: Variable bitrate (1 Pass)

Average bitrate [Mbit/s]: 15,00

Maximum bitrate [Mbit/s]: 18,00

Minimum bitrate [Mbit/s]: 4,00

GOP structure: I BB P BB P BB P BB P BB I

No. of P-frames between I-frames: 4

No. of B-frames between I/P-frames: 2

Only I-frames:

GOP mode: Open GOPs

Distance between closed GOPs: 0

DC coefficient precision: 9 Bit

Motion search precision: Medium quality (slow)

Audio settings

Audio compression: 384 Kbit/s

Figure 5-16: MPEG-2 settings

## 5.2.11 Name and Path Options

With this option, file names for SDI based ingest can be extended to e.g. assign the date or the server IP. This tool is easy to use and eliminates time-consuming processes. A prefix and/or postfix can be selected easily from the drop-down list to the given file.

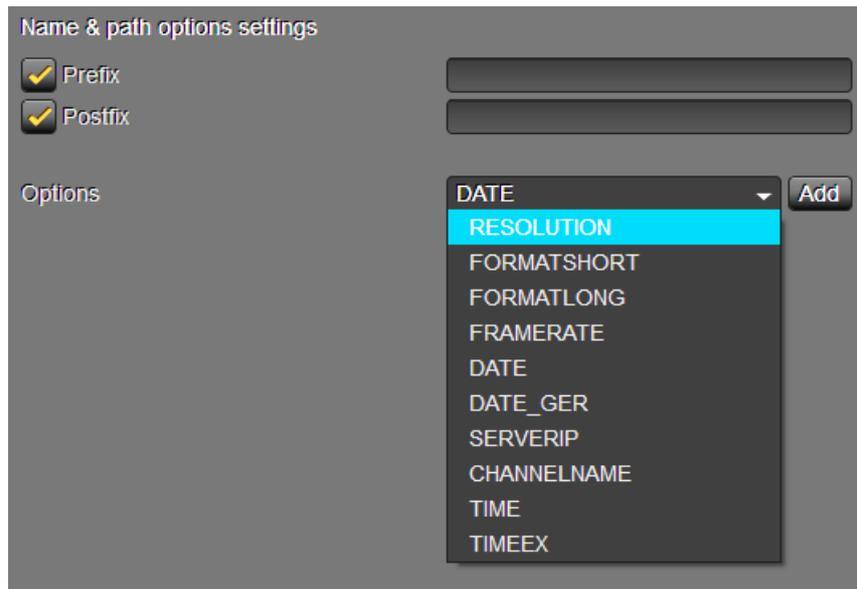


Figure 5-17: Name and path options

It provides the following items:

<b>Prefix</b>	By clicking the check box a prefix from the drop-down list <b>Options</b> can be selected.
<b>Postfix</b>	By clicking the check box a postfix from the drop-down list <b>Options</b> can be selected.
<b>Options</b>	Drop-down list with options to be added to the <b>Prefix</b> or <b>Postfix</b> fields.

### 5.2.12 Playout Settings

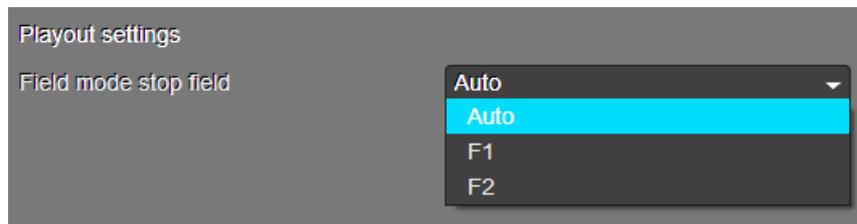
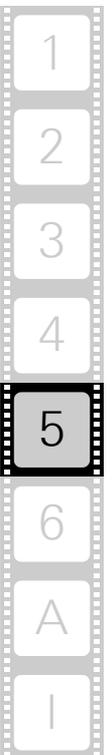


Figure 5-18: Playout settings



It provides the following items:

<p><b>Playout settings</b></p>	<p>This option allows you to set the fields for a playout operation.</p>
<p><b>Field mode stop field</b></p>	<p>In this drop-down list you can choose where to stop at an interlaced playout. Depending on if <b>Field 1</b> or <b>Field 2</b> is selected from the drop-down list the playout will be stopped at the first or second field. When setting <b>Auto</b> the playout will be stopped at the field when the button to stop the playout is pressed.</p>

### 5.2.13 Proxy Generation

The **Proxy generation** settings allow you to simultaneously create proxies during a record with the VENICE server. A proxy is a down-scaled version of the original material that can be used, for example, for offline editing on other systems to enable previews of the video material in real time.

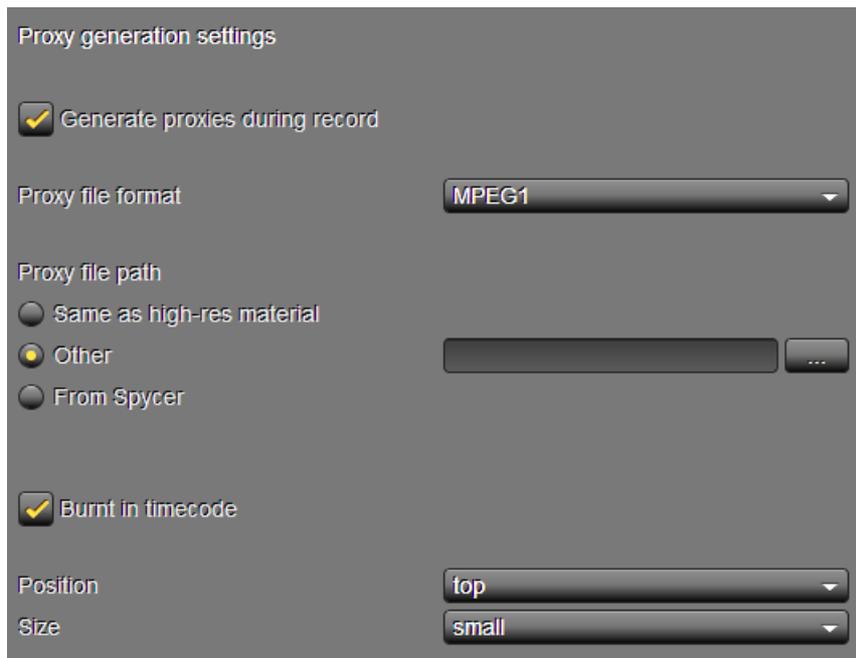


Figure 5-19: Proxy generation settings

These settings provide the following items:

<b>Generate proxies during record</b>	Once this check box is activated, the proxies will be created in the specified format at the set location. They will be generated from the video data that will be streamed to remote VENICE client softwares with a resolution of 640 × 480 pixels.
<b>Proxy file format</b>	Select from this drop-down list the container file format that will be used to create the proxies.
<b>Proxy file path</b>	Determines the location on the storage where the proxy files will be stored. You can select the path that was browsed in the record ( <b>Same as high-res material</b> ), you can browse another path ( <b>Other</b> ) or you can select the settings from the Spycer configuration ( <b>From Spycer</b> ).
<b>Burnt in timecode</b>	Once this check box is activated, the timecode will be burnt-in the file during record (see figure below).
<b>Position</b>	Select from this drop-down list the position (top or bottom) of the burnt-in timecode.
<b>Size</b>	Select from this drop-down list the size (small or large) of the burnt-in timecode.

The following figure shows a burnt-in timecode in contrast to a timecode that is present outside the video material. It contains both timecode positions in one picture.

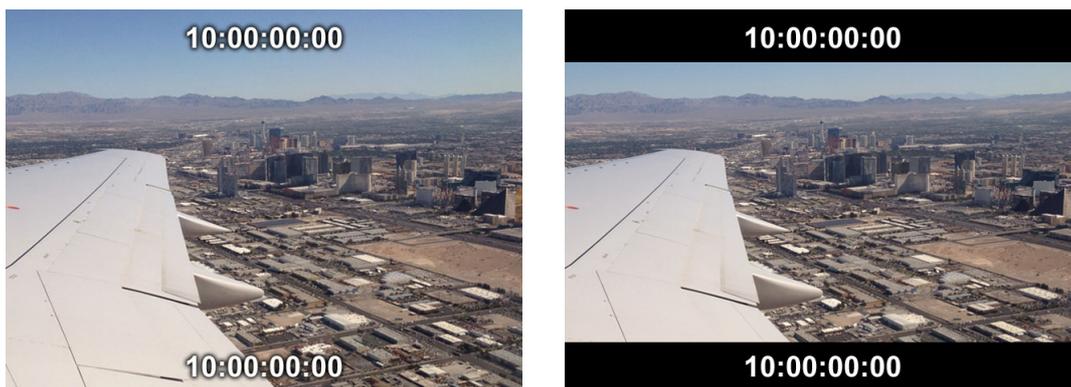
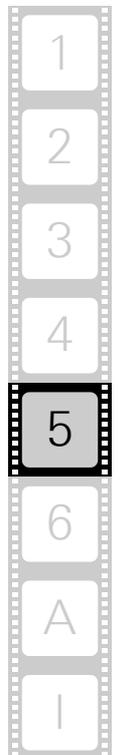


Figure 5-20: Burnt-in timecode in the record file



## 5.2.14 QuickTime

To improve the compatibility of `*.mov` audio files created with the VENICE client software with third-party software, the QuickTime settings are available. The QuickTime container can handle several included mono audio tracks or a single multi-channel track that contains multiple audio channels. VENICE 3.0 can read and write both methods of track packing.



Figure 5-21: QuickTime audio file settings

<b>Audio settings</b>	Select how the audio files should be written into the <code>*.mov</code> container.
<b>Track packing</b>	In this drop-down list you can choose between the options <b>Mono tracks</b> to write the audio channels of a file into independent mono audio tracks inside the QuickTime container for every channel and <b>Single track</b> to write all audio channels into a single multi-channel track inside the QuickTime container.
<b>Force closed caption track</b>	When this checkbox is activated, closed caption data is always written into the <code>*.mov</code> container. If no valid data is provided, replacing data will be written to the file.

## 5.2.15 Remote VTR/HDR

The **Remote VTR/HDR** settings can be used to adapt the behavior of the currently connected video channel of the VENICE server to a certain type of VTR/HDR. Then the video channel will observe the settings when controlling the external device.

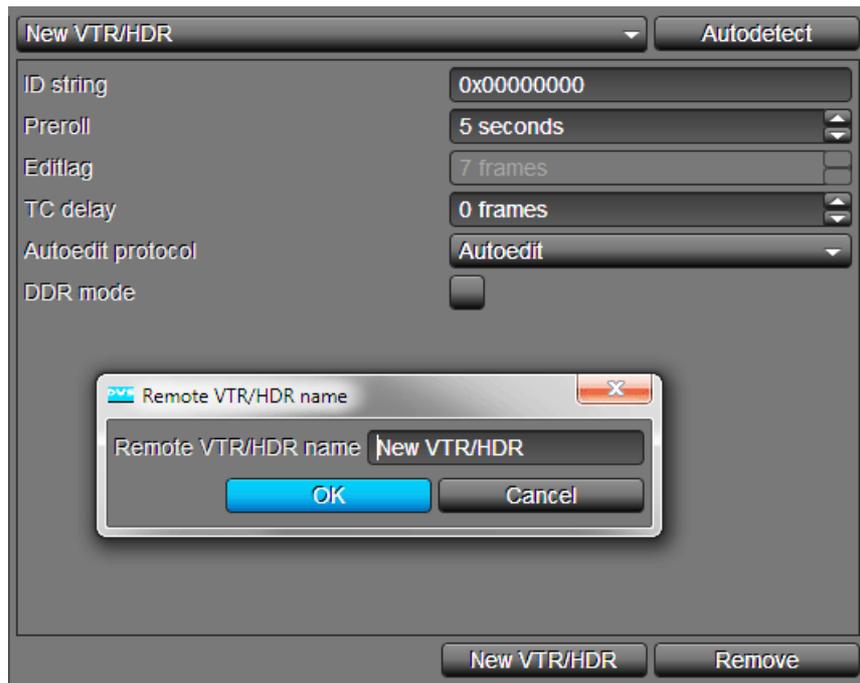
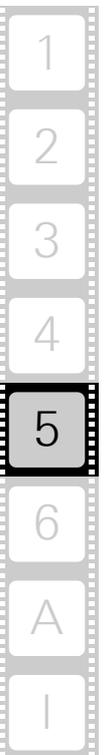


Figure 5-22: Remote VTR/HDR settings

It provides the following items:

drop-down list ('New VTR/HDR')	Lists already configured external device profiles. When selecting one from the drop-down list, its settings will be displayed below and applied to the video channel.
<b>AUTODETECT</b>	Tries to identify the connected external device. If a device with an identical ID, preroll and edit lag can be found among the already configured device profiles, it will be automatically selected in the drop-down list and its settings will be displayed. If the device could not be identified, you will be asked to enter a name for the new device.
<b>ID string</b>	Indicates and sets the ID of the device.
<b>Preroll</b>	Sets the preroll time of the external device, i.e. the time needed by the device to bring it to the correct speed for the operation.
<b>Editlag</b>	Sets the edit lag (edit delay) of the external device, i.e. the time it takes for the external device to respond to a command.



<b>TC delay</b>	Adjusts the RS-422 timecode (in frames), useful when video and timecode signals diverge. When set to a positive value, it delays the timecode that is received. When set to a negative value, the timecode that is sent out is increased (predicted), based on the assumption that the external device is playing out. This may lead to false values when the external device is in other operation modes.
<b>Autoedit protocol</b>	Sets the autoedit behavior that is supported by the external device. When <code>Autoedit</code> is selected, the edit-on/off commands are performed by the device automatically (recommended setting). With <code>Edit On/Off</code> selected the VENICE server sends out the edit-on/off commands explicitly (for older VTRs).
<b>DDR mode</b>	When activated, the VENICE server sends out standard goto commands. When deactivated, the goto commands will be simulated by jog/shuttle commands (for VTRs that do not execute goto commands under all circumstances).
<b>NEW VTR/HDR</b>	When clicking this button a dialog window opens where you can add a new external device to the drop-down list 'New VTR/HDR'.
<b>REMOVE</b>	Removes the device profile that is currently selected with the drop-down list.

## 5.2.16 Scaler

The **Scaler** settings determine the filter used for zooming as well as sharpness.

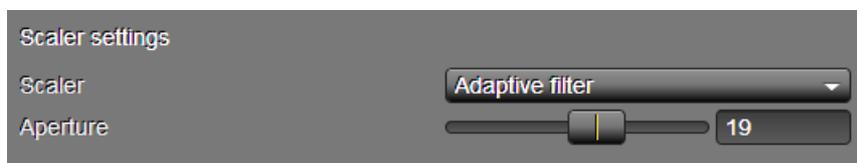


Figure 5-23: Scaler settings

It provides the following items:

<b>Scaler</b>	Determines the filter (algorithm) that will be used to change the video image content:	
	Adaptive filter	Optimized filtering for scaling, resulting in high-end quality pictures.
	Adaptive plus filter	Doubles the precision and quality of the 'Adaptive filter'.
	 Adaptive plus, at 8 taps, looks better for a downscaling. For upscaling and scaling around 1.0 it results in more artifacts ('ringing') than the adaptive filter.	
<b>Aperture</b>	Sharpens (> 1) or blurs (< 1) the image content. Main usage is for Moiré effects (interferences in your video output signal usually caused by fine black and white image details, e.g. striped or checked patterns). Then, use these items until the jittering or other interferences disappear.	

## 5.2.17 Still Mode

With the **Still mode** settings you can determine what to give out when a timeline has been played fully and the playout stops.

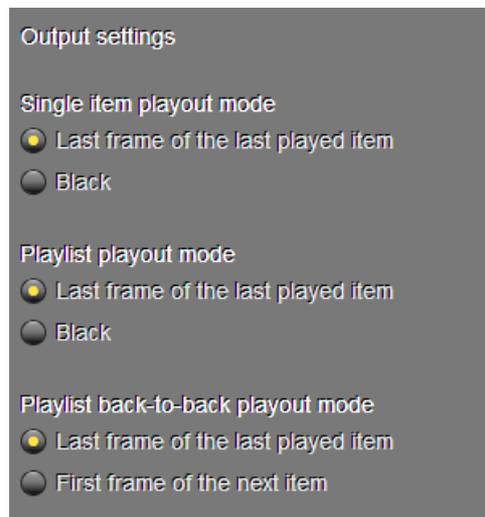
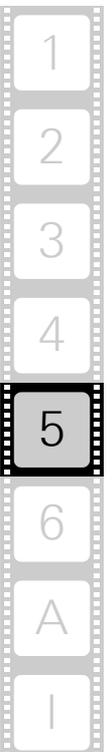


Figure 5-24: Still mode settings



It provides separate settings for the different items that can be played out by the VENICE client software:

- Single item playout mode
- Playlist playout mode
- Back-to-back playout for a playlist

Select for each what should be given out when the playout ends.

### 5.2.18 Storage Capacity

The **Storage capacity** settings allow you to adjust the safety margin of the main storage for record operations with the VENICE client software.

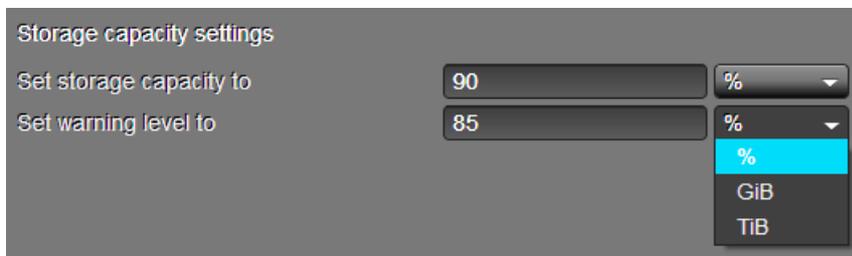


Figure 5-25: Storage capacity settings

It provides the following items:



Leave about 15% of the overall main storage capacity empty of data for real-time performance reasons.

When increasing the default values, be aware that drops may occur during record or playout operations once the amount of stored data exceeds the defaults.

<b>Set storage capacity to</b>	Allows you to set the maximum storage capacity that will be available for record operations. Beyond this value any recordings with the DVS software will be prohibited. The default value is 90%.
<b>Set warning level to</b>	If the amount of data on the storage exceeds this value, a warning message will appear each time the ingest mode is activated as well as prior to each record operation. It will notify you that the maximum storage capacity will be reached soon. The default value is 85%.

## 5.2.19 VDCP

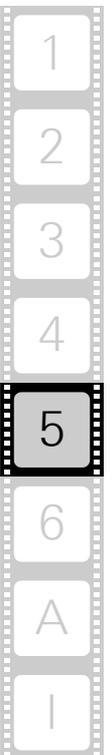
With the **VDCP** settings you configure the video channel for a remote mode operation via VDCP. It connects to a playout automation system and offers the fastest reaction time through clip pre-buffering, while no pre-cueing is needed anymore.



Figure 5-26: VDCP settings

It provides the following setting items:

<b>Root path</b>	Enter in this field the path to the video material when the video channel should be controlled in remote mode via VDCP. For a playout the material that is expected in this path (root directory directly or one level down) are VENICE metaclips.
<b>Simplify clip name</b>	When deactivated, you have to send the complete path and name to the clip that should be processed: <code>&lt;rootPath&gt;/ [&lt;subdir&gt;/] &lt;clipName&gt;.&lt;ext&gt;</code> When activated, the field <b>Root path</b> will be automatically added to the sent clip name. Additionally, you have to leave out the file extension: <code>[&lt;subdir&gt;/] &lt;clipName&gt;</code>
<b>No timecode delay</b>	Implemented for special systems that require a timecode signal immediately. When activated, a timecode will be sent out even if no video signal is present (e.g. during the edit lag, see section "RS-422 Control" on page A-9).
<b>Show first cued frame</b>	Sends out the first cued frame instead of black if the video channel is in pause or queued in.



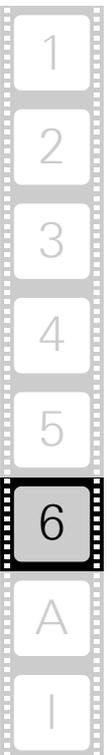


## Level Administrator



The 'Administrator' has the user rights to access all features of the VENICE client software and therefore access to all software features of the 'User' (see section "User Level Management" on page 2-5 and chapter "Level User" on page 4-1) and the 'Superuser' (see chapter "Level Superuser" on page 5-1). Furthermore, the 'Administrator' has several more possibilities that he can directly navigate to via the user interface. The 'Administrator' can make server configurations or set new passwords for the respective user levels.

Apart from this, it is the task of the 'Administrator' to install the software, make IP configurations or set the webservice. How these operations can be performed and other descriptions of settings and configurations can be found in this chapter.



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## 6.1 Updating the Software on the VENICE Server

During the service life of the VENICE server it may be required to update its software. The update will be performed with the standard RPM installation package for VENICE. It will contain the newest versions of the PCIe video board driver, the VENICE server software as well as the locally installed VENICE client software.

- If applicable, open a command line (terminal) and log on to the system as root.
- Switch to the directory that contains the new installation file.



Before updating the software on the VENICE server you should know if software and hardware are compatible.

- Then first erase the installed software by entering:  

```
rpm -e Venice
```
- Then install the new software by entering:  

```
rpm -ihv Venice-<version no.>_<kernel/OS architecture>.rpm
```

This updates the necessary files and libraries of the DVS software on the computer system. Afterwards the update is complete.

## 6.2 Installation of the VENICE Client Software

Usually the VENICE client software is already installed on the system and you just have to update the software on the server as described in section “Updating the Software on the VENICE Server” on page 6-3. In case you have to install the VENICE client software from new, you find all necessary information in the following sections.

### 6.2.1 Installing under Linux

The installation routine of the VENICE client software for a Linux operating system is a single RPM package file. Usually, it can be found on the enclosed CD-ROM. To install the VENICE client software on a Linux operating system, perform the following:

- If applicable, open a command line (terminal).
- Log on to the system as root.
- Switch to the directory on the CD-ROM that contains the installation file of the VENICE client software for the current operating system.



- Then install the VENICE client software by entering, for example:  

```
rpm -ihv Venice-<version no.>_<kernel/OS architecture>.rpm
```

This installs all necessary files and libraries of the DVS software on the computer system. Afterwards the installation of the software is complete and it can be started at any time with a normal user account.



Please note that on a Linux client the driver and VENICE server software are installed as well but will not be used.

The DVS software can be deinstalled by entering `rpm -e Venice` in a command line.

## 6.2.2 Installing under Windows

The installation routine of the VENICE client software for the Windows operating system is a single executable file. Usually, it can be found on the enclosed CD-ROM. To begin the installation, perform the following:

- Open a file manager on the computer system (e.g. Windows Explorer).
- Browse the CD-ROM and switch to the directory on the CD-ROM that contains the installation file of the VENICE client software for the current operating system.
- Execute the installation file of the VENICE client software (*Install\_Venice-<version no.>.exe*), for example, with a double-click of the mouse.

This starts the installation routine which will guide you through the installation.

- Follow the instructions given on the screen.

During the installation procedure all necessary files and libraries will be installed on the computer system. The installation will be finished as soon as a message reports this.

With this the installation of the software is complete and it can be started at any time.



The DVS software can be deinstalled via **Programs and Features** of the control panel of Windows. Search for the entry 'DVS Venice <version no.>'.

## 6.2.3 Installing under Mac OS

The VENICE client software for Mac OS is available in a single disk image file. Usually, it can be found on the enclosed CD-ROM. To install the VENICE client software on a Mac OS, perform the following:

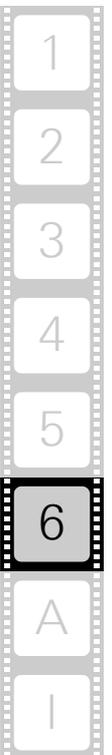
- Open a file manager on the computer system (e.g. Finder).

- Browse the CD-ROM and switch to the directory on the CD-ROM that contains the installation file of the VENICE client software for the current operating system.
- Open the installation file of the DVS software which will mount it as a volume (*Venice-<version no.>.dmg*, e.g. with a double-click of the mouse).
- From this volume install the DVS software, for example, by dragging the *Venice.app* file into the *Applications* folder on the sidebar of the finder.

This installs all necessary files and libraries of the DVS software on the computer system. Afterwards the installation of the software is complete and it can be started at any time with a normal user account.



The DVS software can be deinstalled by deleting the *Venice.app* entry from the *Applications* folder.



## 6.3 Updating the Firmware on the VENICE Server

During the service life of the VENICE server it may be required to update the firmware of the PCIe video boards on the VENICE server. The update will be performed with the standard RPM installation package for VENICE. It will contain the newest versions of the PCIe video board firmware.



Before updating the firmware on the VENICE server it is recommended to update the VENICE server software as described in section "Updating the Software on the VENICE Server" on page 6-3.



Depending on the installed video boards it is necessary to install different firmware versions. Check the video board in the DVS Control Panel (see section "DVS Control Panel" on page 6-20) and contact the DVS service department for the respective firmware file.

- If applicable, open a command line (terminal) and log on to the system as root.
- Switch to the directory that contains the new installation file.
- Then first execute the command  
`chmod 777 <firmware_version>`  
(e.g. `chmod 777 atomixhdmip_7.5.0.1_7.0.10`)  
to change the permissions of the file to read, write, and execute for all.
- Enter `./<firmware_version>` in the command line to start the installation process

The system will ask you whether to change the firmware on one video board or both installed video boards.

- Press `y` (one card) or `a` (all cards) and then `[Enter]` to continue.



If you want to abort the process at this point, press any other key and `[Enter]`.

- Heed the instructions on the screen.

After having rebooted the system, the firmware on the PCIe video boards of the VENICE server should be updated.

## 6.4 Notes about Spycer

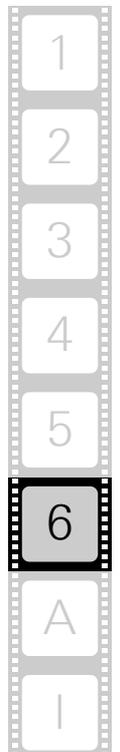
For any data management with a VENICE client software the corresponding Spycer application by DVS must be installed as well (see section "System Requirements" on page 1-6 and section "Setup Concept and Structure" on page 2-3).

After its installation the Spycer application has to be configured appropriately so that it can connect to the Spycer software on the VENICE server (SpycerNet):

When the software is started for the first time, the initial setup of the application will be launched. Then set at least the IP address of the port on the client system that is connected to the network to enable the SpycerNet. On clients the local content management of Spycer can be disabled if not required.



For information about how to install Spycer as well as its configurations see the "Spycer" user guide.



## 6.5 IP Address Configuration

After installing the hardware of VENICE as described in its hardware guides, you may want to configure the server's IP address to connect it to your local network. Ex factory the VENICE server is already preconfigured for a network usage and can be used immediately with this. However, in case you want to alter the configuration to adapt it to your local network, you can configure it easily.

This section describes the delivery status of the network configuration of the VENICE server as well as how to change it.



The locally installed VENICE client software has to connect to a video channel on the VENICE server the same way as a remote installed software, i.e. it connects via network using the configured IP address.

### 6.5.1 Delivery Status

The network ports of the VENICE server and its software are ex factory preconfigured:

Port	Configuration
eth0	static, 10.0.0.<x>/24
eth1	dynamic, DHCP

The first network port (eth0) is configured as indicated in the table above. If it fits your network, it can be used to set up the system as a video server. The VENICE server software and the locally installed Spycer application are also set to this IP address. To find out the actual IP address, use either the command line/system tools (e.g. menu **System » Administration » Network**) or the DVS Configuration Tool (see section "DVS Configuration Tool" on page 6-11).

With the preconfigured settings of the second network port (eth1) you can connect the VENICE server as a standard DHCP client to the network.

## 6.5.2 The Service.conf

The file *Service.conf* in the directory */etc/opt/DVS/Venice/* stores various configuration settings. Among them you can find the user name and the IP address used by the VENICE server software. You can change these settings to your liking (see section “IP Address Configuration” on page 6-8).



All other settings of the configuration files should not be altered.

Whenever, you change one of the configuration files of VENICE, the VENICE server software and/or the VENICE client software must be restarted (see section “Controlling the VENICE Server Software” on page 6-15).

## 6.5.3 Changing the IP Address

The VENICE server and its software are preconfigured to the IP address of the first network port as indicated in section “Delivery Status” on page 6-8. In case you want to alter the network configuration of the VENICE server, several steps have to be performed:

1. You have to change the IP address of the respective network port.
2. You have to set the IP address for the VENICE server software and restart it.
3. You have to change the IP address in the Spycer software.

These steps are described in the following.

### Configuring the IP Address of the Network Port

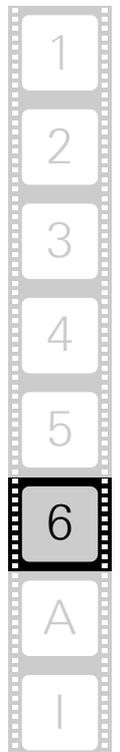
To configure the IP address of the network port, use the command line/system tools (e.g. menu **System » Administration » Network**). It is recommended to give the port a static IP address so that it can always be reached under the same address in the network. When finished, either reboot the VENICE server or restart the network service of the operating system.

### Setting the IP Address for the VENICE Server Software

The IP address that has been configured for the VENICE server has to be set in a configuration file of the VENICE server software as well. This IP address will then be used by the server software to identify connection requests to the server from VENICE client softwares (from the locally installed one as well as remote ones).



The following can also be performed with the DVS web utility (see section “DVS Configuration Tool” on page 6-11).



- In the path `/etc/opt/DVS/Venice/` open the file `Service.conf` with a text editor.
- In the section `[Service]` change the line `IP=10.0.0.<x>` to the IP address which you have set for the network port.
- Then save the file.
- Afterwards either reboot the VENICE server or restart the server software (see section “Controlling the VENICE Server Software” on page 6-15).

After this the VENICE server is prepared to receive connection requests, but to conclude the changing of the IP address you have to change the IP address for the Spycer software as well.



It is recommended to comment out the IP addresses that you are not using with the VENICE server in the file `resolv.conf` in folder `etc`. Otherwise, the VENICE server will try to connect to these IP addresses and processes might take unnecessarily longer.

### Setting the IP Address of the Spycer Software

To get the full functionality for the DVS system, the Spycer software is already installed. When changing the IP address of the network port it must be configured correctly as well. For this start the Spycer software on the VENICE server and make sure that it is set to the following:



When the Spycer software is started for the first time, the initial setup of the application may be launched. In order to run Spycer this setup should be concluded, thereby enabling the following configurations.

For further information about Spycer and its configurations see the “Spycer” user guide.

- The IP address of the network port that Spycer should use for the SpycerNet must be set. Normally it is the same as configured previously (see section “Configuring the IP Address of the Network Port” on page 6-9).
- The local content management must be enabled.
- The local audio and video storage location(s) of the VENICE server (see section “Information about the Main Storage” on page 6-12) must be set as watch folders.

With this the Spycer software has been set up correctly and afterwards the user interface of Spycer can be closed.

## 6.6 DVS Configuration Tool

The DVS Configuration Tool can be used to configure the VENICE server. Once the operating system is loaded, it can be found on the desktop of the system.

The DVS Configuration Tool will run in the standard web browser of your system. In case such an icon cannot be found on the desktop, you can access the DVS Configuration Tool by entering `http://localhost/` in a web browser. To access it from a client station, enter in the web browser `https://<IP address of VENICE>` (i.e. SSL encryption at port 443).

After accessing the DVS Configuration Tool you have to enter a user name (default: `admin`) and password (default: `venice`).

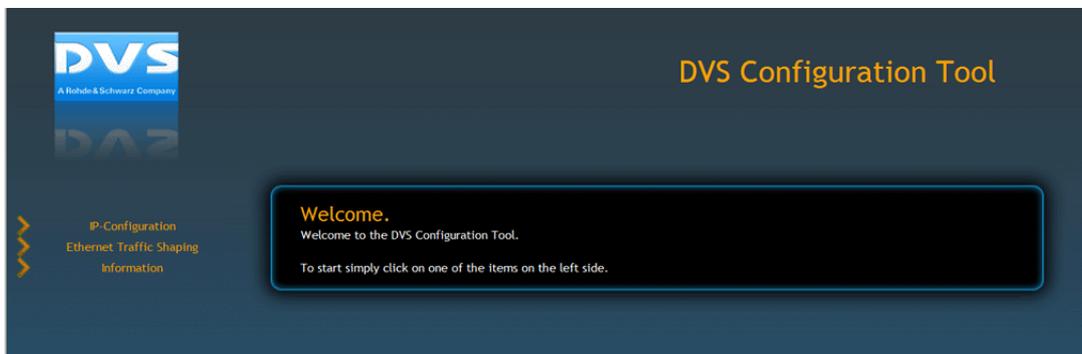


Figure 6-1: Starting screen of the DVS Web Utility

With the DVS Configuration Tool you can change the configurations of the DVS system (e.g. the Ethernet IP address). Click on the respective item to the left to view and change the configurations. Then follow the instructions on the screen.



## 6.7 Information about the Main Storage

The following table provides some information about the main storage:

File system:	SNFS (StorNext File System)
Location:	<i>/media/venice-vol0/</i>
License file:	<i>/usr/cvfs/config/license.dat</i>

Sometimes it is necessary to update the license for the StorNext file system. This can happen, e.g. if you update the maintenance license or connect a further DLC (Distributed LAN Client) to the network. To update the license, perform the following:

- Contact the DVS service department for the respective license file. You will receive a license file containing an alphanumerical prefix and the postfix *license.dat* like e.g. *SN123license.dat*.
- Move the license file to the folder */usr/cvfs/config/*  
*license.dat* and rename the old license file  
(e.g. *license\_old.dat*).
- Now you have to stop the file system using the command  
*/etc/init.d/cvfs*.



If you do not stop the file system, updating the license will not work.

- Now change the name of the new license file from  
*SN123license.dat* to *license.dat* and start the system using  
the command */etc/init.d/cvfs start*.

After starting the new license file will be recognized and automatically used by the system.

## 6.8 Server Configuration

The menu **Options** of the VENICE client software provides the option **Server configuration...** that allows you to set server related configurations directly from the user interface of a VENICE client software. It opens the following window:

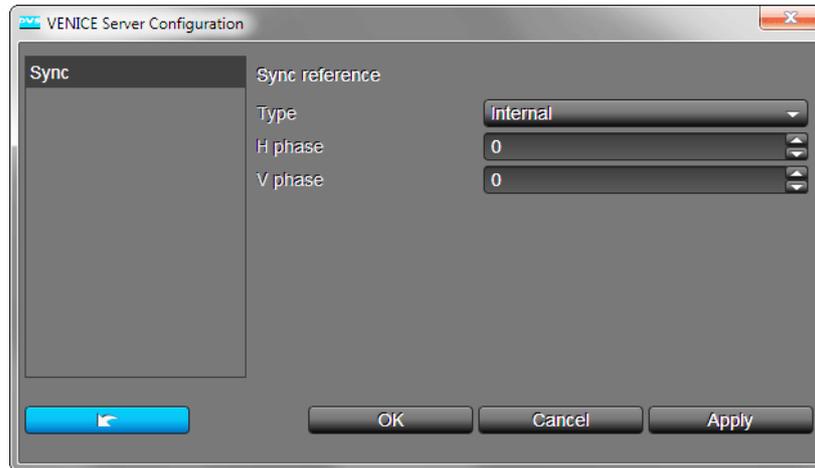


Figure 6-2: The server configurations

The window can be used the same way as the '**VENICE Configurations**' window (see section "Configuration" on page 5-15).

This section describes the server configuration settings in detail.

The **Sync** settings set the synchronization of in- and output video signals for the video channel pairs 1/2 and 3/4 of the VENICE server. For the video channel pairs different settings can be set when either one of these channels has the focus in the VENICE client software.



When changing the sync settings of a channel this will effect the respective second channel of the video channel pair.



Sync settings can only be made on the first channel of a video channel pair.

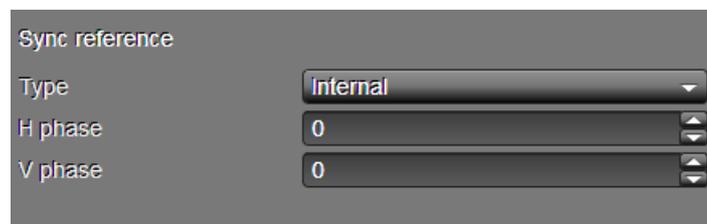


Figure 6-3: Sync settings



The following settings items are provided:

<b>Type</b>	Determines the type of sync for the input thereby determining the sync output. Usually, the video channels run in a non-genlock mode, i.e. an internal synchronization is performed ( <code>Internal</code> ). To set the video channels into an analog genlock mode connect a signal to the reference input and select an appropriate sync type here (e.g. <code>Bilevel</code> or <code>Trilevel</code> ). If a synchronization should be performed via the signal received on the SDI inputs, select the setting <code>Digital</code> .
<b>H phase</b>	Adjusts the horizontal phase of the sync output signal relative to the input sync signal. The output signals will be altered accordingly, i.e. the time base of the output signals will be generally altered. The value is for SD video rasters in half-pixels, for all others in full pixels.
<b>V phase</b>	Adjusts the vertical phase of the sync output signal relative to the input sync signal. The output signals will be altered accordingly, i.e. the time base of the output signals will be generally altered. The value is in lines.

## 6.9 Controlling the VENICE Server Software

The VENICE server software can be controlled with the VENICE script. With it you can determine the current state of the individual video channels and control them (start, stop or restart).



The VENICE script is also used for writing log files (see section “Creating Log Files” on page 6-17).

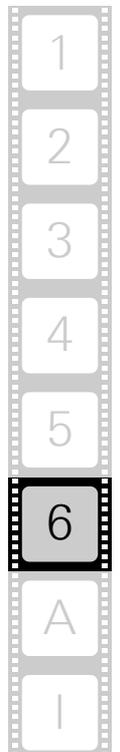
A manual stopping and restarting of video channels may be required for one of the following:

- After altering one of its configuration files (e.g. *Service.conf*, see section “Changing the IP Address” on page 6-9).
- To force a disconnection/freeing of a video channel.
- In case of a lost connection to a channel which cannot be resolved otherwise.

The VENICE script is located in the path */etc/init.d/*. To execute, for example, the restart command enter (from any location):

```
/etc/init.d/venice restart
```

Syntax:	<code>venice &lt;command&gt; [&lt;#channel no.&gt;]</code>								
Remarks:	To address all channels at once leave out the channel number. For help information just enter <code>venice</code> .								
Commands:	<table> <tr> <td><code>status</code></td> <td>Returns the current status of all channels.</td> </tr> <tr> <td><code>start</code></td> <td>Starts the processes for a channel.</td> </tr> <tr> <td><code>stop</code></td> <td>Stops the processes for a channel. An already established connection from a VENICE client software will be severed.</td> </tr> <tr> <td><code>restart</code></td> <td>Stops the processes for a channel (if not already the case). An already established connection from a VENICE client software will be severed. Afterwards the channel will be started automatically again.</td> </tr> </table>	<code>status</code>	Returns the current status of all channels.	<code>start</code>	Starts the processes for a channel.	<code>stop</code>	Stops the processes for a channel. An already established connection from a VENICE client software will be severed.	<code>restart</code>	Stops the processes for a channel (if not already the case). An already established connection from a VENICE client software will be severed. Afterwards the channel will be started automatically again.
<code>status</code>	Returns the current status of all channels.								
<code>start</code>	Starts the processes for a channel.								
<code>stop</code>	Stops the processes for a channel. An already established connection from a VENICE client software will be severed.								
<code>restart</code>	Stops the processes for a channel (if not already the case). An already established connection from a VENICE client software will be severed. Afterwards the channel will be started automatically again.								



## 6.10 Changing the Password for a User Level

When logged in with user rights of the 'Administrator', you can change the password for each user level. For this you have to be connected to a channel (see section "Connecting to a Video Channel" on page 2-11) and logged in as 'Administrator' with your password.

- Then navigate to the menu **Options » User level...**

This will open the login window of the VENICE client software that will look a little bit different than the login window you see when connecting to a video channel (see section "Connecting to a Video Channel" on page 2-11) as in the following figure:

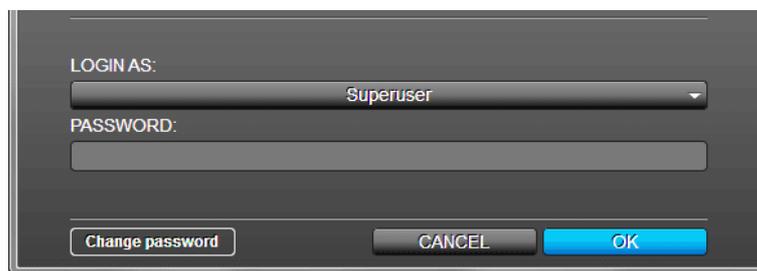


Figure 6-4: Lower part of login window for the 'Administrator'

- Select the user level you want to change the password for from the drop-down list **CURRENT LEVEL:**.

The drop-down list will change to the drop-down list **LOGIN AS:**.

- Then click the button **CHANGE PASSWORD** to the bottom left of the login window.
- Type the current password into the entry field **PASSWORD:** and the new password into the entry fields **NEW PASSWORD:** and **REPEAT:**.
- Press the button **CONFIRM** to apply the new password.



This way the 'Administrator' can change his own password as well.

The new password will be set for all channels of the respective VENICE server. It is not necessary to connect to the other channels and change the passwords there. The next time the respective user will have to log in with the new password.

## 6.11 Creating Log Files

To aid a debugging, log files can be created which detail the actions performed by and with the system. You may get asked by the DVS service department to send in these files in case of problems with VENICE. The logging of actions can be controlled with the `dvslogwatch` service. This service allows you to create log files from the server which detail the actions performed by and with the VENICE server. They will be saved at a location of your choice in an archive file.

This section deals with the following topics:

- How to gather log files in the VENICE client software
- How to gather detailed real-time log files manually by using commands

### 6.11.1 VENICE Log Files

In case of problems with the VENICE server, you can gather the log files and send them to the DVS service department. There are two ways to perform this:

- You can use the option **Gather logs...** in the menu **Help** of the VENICE client software
- You can gather the logwatch log files (detailed real-time log files) from the VENICE server

#### Gathering log files using the menu 'Help'

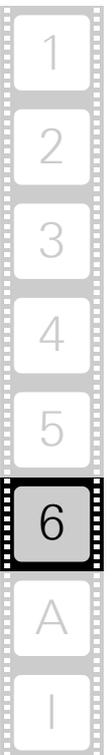
The menu **Help** in the VENICE client software offers you the option **Gather logs...** to create an archive file containing the log files of the respective VENICE server (see "VENICE Client Software User Guide"). This option captures a rather short period (max. 4 MB) of the current system status. If you need the log files of a longer period of time, use one of the methods as detailed in the following.



Due to the relative short timeframe of logged actions by and with the VENICE server it is recommended to gather log files immediately after a problem with the server has occurred.

#### Gathering real-time log files from the `dvslogwatch` service

If you need detailed real-time data of a longer period of time, you have to gather the logwatch log files which contain approx. 1 GB of data. Perform the following:



- On the VENICE server where the problem has occurred open the command shell as root user and enter the following command:  
`/etc/init.d/dvslogwatch collect [filename.zip]`



You can enter the command either with the parameter [filename.zip] or without it. If without the parameter, the file will be named e.g. `/tmp/logwatched_2013-05-03_15-06-01.zip` automatically.

In some cases it is not possible to use the command as detailed above for gathering the log files. This can happen on older VENICE systems. In this case you have to gather the log files manually. The log files are stored in a folder of the system user which is 'venice' in the VENICE default installation (see variable `<Username>` in the configuration file `/etc/opt/DVS/Venice/Service.conf`).

- On the VENICE server where the problem has occurred change into the directory containing the log files.
- In case the dvslogwatch service is started as normal system user, open the command shell and enter the following command:  
`cd /home/<USER>/.DVS`
- In case the dvslogwatch service is started as root user, enter the following command:  
`cd /var/opt/DVS`

Now you have to create the `*.zip` file.

- Enter the following command:  
`zip -9 -r logwatched_<DATE>.zip logwatched`

The system will now create a `*.zip` file in the defined directory containing the detailed log files.



The real-time log files are very detailed and thus you should know on which channel the problem occurred and the approximate period of time to restrict the area of logs to be searched.

## 6.11.2 Further configurations

In the following you find further commands and parameters to configure the dvslogwatch service settings:

- You can start, stop, restart and query the status of the logwatch service or collect the log files using the command:  
`/etc/init.d/dvslogwatch start|stop|restart|status|collect`
- You can also configure the start settings of the dvslogwatch service (by default an automatic start is set to on) by editing the configuration file `/etc/init.d/venice` and setting the variable `LOGWATCHAUTOSTART="0"` to off or `LOGWATCHAUTOSTART="1"` to on again.

- If you want to configure the size of the log file, you have to edit the file `/etc/init.d/logwatch` and change the following variables:  
`LOGWATCHARGS1="--maxfiles=20 --maxsize=100"`  
`LOGWATCHARGS2="--maxfiles=20 --maxsize=100"`

You can configure the size of the logging ring buffer with the two parameters *maxfiles* and *maxsize*. The standard setting is 20 files and 100 MB, afterwards the files will be overwritten. If you want to e.g. double it, enter e.g. 20 and 200 in the parameter fields.

### 6.11.3 Important Logs

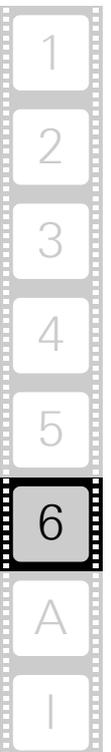
In case of service the log files that are necessary for the DVS service department to work on your request can differ. Depending on the case the following files must be present:

- In case a single channel disconnected unexpectedly the avus logs in the folder *AvusLog*



Depending on the channel number you need the log files from the folder *AvusLog1* or *AvusLog2*, etc.

- The log files from the folder *VeniceLog*
- The log files from the folder *VeniceServerLog*, depending on the channel number where the problem occurred
- In case of a problem with e.g. the record scheduler the Spycer log files may be necessary as well



## 6.12 DVS Control Panel

The DVS Control Panel is a software utility that you can use to inform yourself about the PCI video boards that are installed in the system as well as about the current configurations of the video channels. Additionally, you can use it to set licenses. You can find the program in the **Applications** menu of Linux under the entry **Sound & Video » DVS Control Panel**.

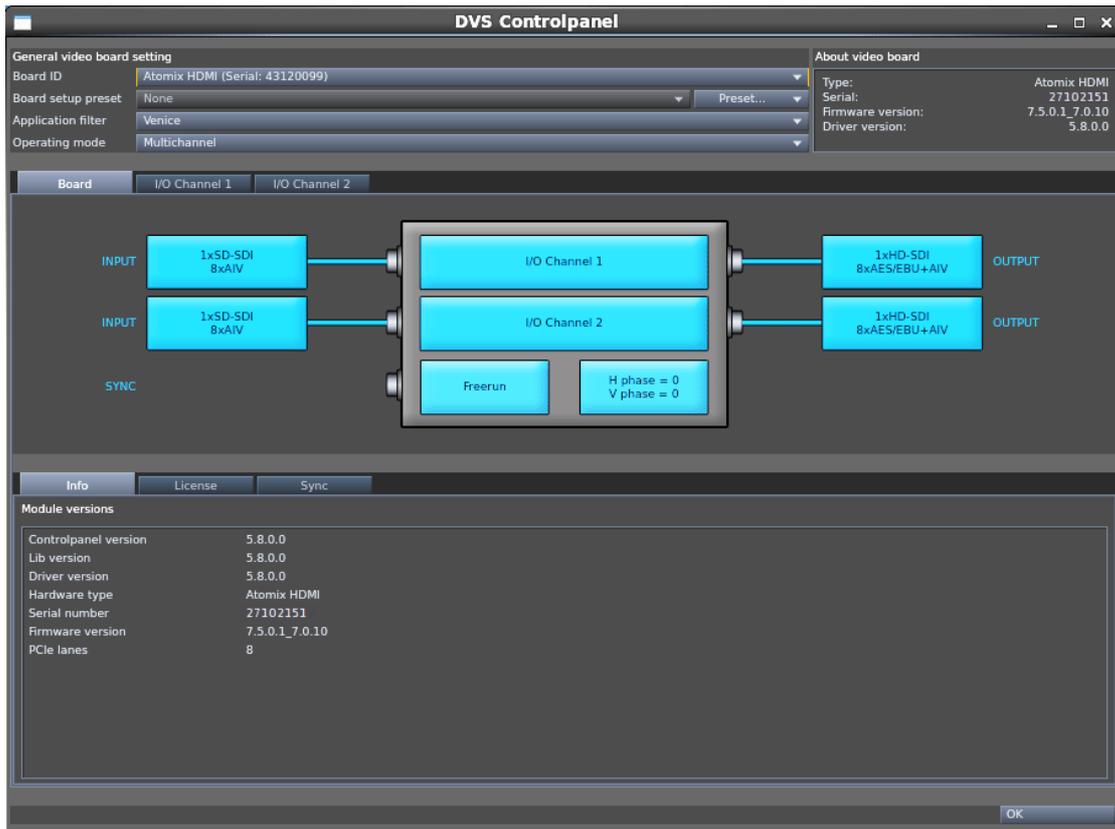


Figure 6-5: Starting screen of the DVS Control Panel

This section explains the user interface and basic usage of the DVS Control Panel.



When a connection to a video channel on the VENICE server is established, some items may be unavailable.

### 6.12.1 Area 'General video board setting'

In this area you can select the video board that should be shown by the application as well as perform further general settings:

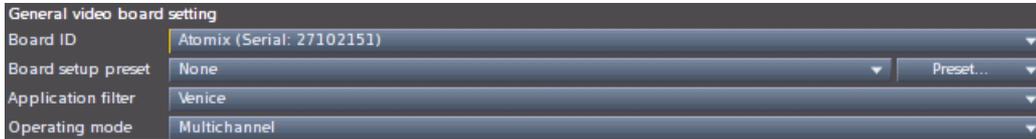


Figure 6-6: General video board settings

<b>Board ID</b>	Selects the video board that should be displayed. Per installed DVS video board up to two video channels may be available.
<b>Board setup preset</b>	Allows you to use presets for a board setup similar to the presets available to preconfigure the VENICE client software. For further details about how to use these items see the "VENICE Client Software" user guide.
<b>Application filter</b>	Provides predefined filters that configure the board to settings suitable for a specific application and usage. Once a predefined filter is selected, the video channel settings such as video raster or audio format cannot be changed.
<b>Operating mode</b>	Sets the single- or multi-channel operation mode for the selected video board, i.e. whether one or more video channels are provided by the video board. How many channels are available per video board depends on the type of the board.



### 6.12.2 Area 'About video board'

This area shows you further details about the currently selected PCIe video board such as its type, serial number or firmware version:

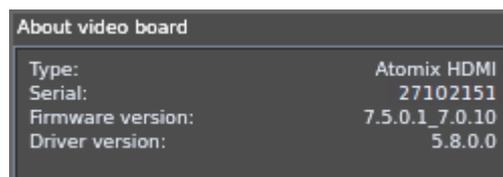


Figure 6-7: Information about the currently selected video board

## 6.12.3 Graphic Representation

In the middle of the user interface you can see a graphic representation of the selected video board and its video channels. It shows you graphically the current setup of the video board/channel:



Figure 6-8: Graphic representation of video board and channels

Via the tabs at the top you can switch from the view of the video board to the view of its video channel(s). When the **Board** tab is selected, you can view and set general configurations for the video board in the settings pane below the representation (see section “Settings Pane” on page 6-22). When a video channel tab (e.g. **I/O Channel 1**) is selected, you can view and set the configurations for input and output of this video channel in the settings pane.

You can also use the graphic representation directly to switch the view: By clicking on one of its parts the video channel/item as well as its settings are displayed (graphic representation as well as settings pane).

On the video channel tabs you can also see if a signal is present at an input of the video channel as well as the signal’s configuration and the configuration of the input/output of the video channel. These indications will be updated immediately.

## 6.12.4 Settings Pane

Below the graphic representation (see section “Graphic Representation” on page 6-22) you can find the settings pane. Depending on the part that is selected for a view via the graphic representation it shows you either the general configurations for the video board or the settings of the in- or output of the video channel:

Info	License	Sync
<b>Module versions</b>		
Controlpanel version	5.8.0.0	
Lib version	5.8.0.0	
Driver version	5.8.0.0	
Hardware type	Atomix HDMI	
Serial number	27102151	
Firmware version	7.5.0.1_7.0.10	
PCIe lanes	8	

Figure 6-9: The settings pane

In this area you can view and set the configurations of the video board or video channel.



Video raster or audio settings performed here are without consequence for an operation of the VENICE server: Any established connection to a video channel has priority over the settings made in the control panel (device is in use).

## 6.12.5 How to Set Licenses

You can use the DVS Control Panel to set license keys for the installed video boards. The license key(s) activate the individual feature set required for the system. Per video board up to two license keys can be loaded and each board must have a valid license. Every time the system is started, all keys are checked and their features are combined.

To set a license key or view the licenses of the currently selected video board select from the area with the graphic representation the **Board** tab (see section “Graphic Representation” on page 6-22). Then the settings pane shows you the general configurations of the video board (see section “Settings Pane” on page 6-22). On the tab **License** you can see the licenses that are set for the currently selected video board:

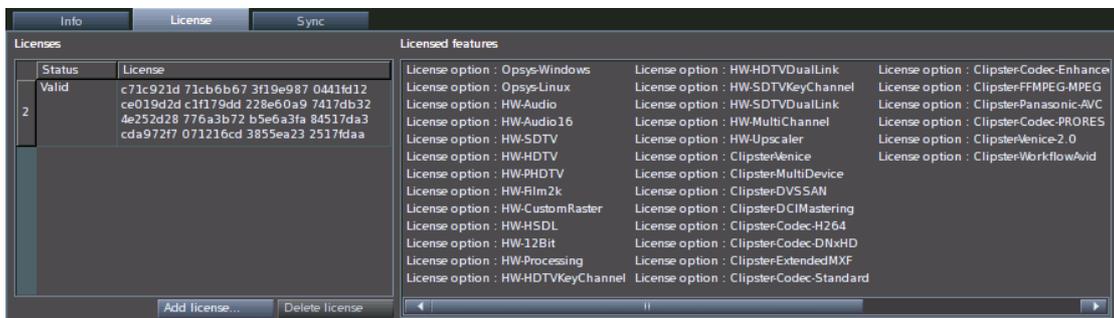


Figure 6-10: The tab to set licenses

In case you want to set a license key, you will have received it as a text file. Via the button **ADD LICENSE...** you can select this text file and the license will be set. The features provided by this license are detailed in the list box to the right. By selecting a license in the list on the left side and pressing the button **DELETE LICENSE** a set license can be removed.



To use the tab **License**, make sure that all VENICE processes (e.g. connected video channels) are closed and no other processes e.g. via remote access are running. If this is not given, the license tab will show no information and setting licenses will not be possible.



## 6.13 Enabling the Web Service

The web service (SOAP interface) allows you to develop an application of your own that can be used to control the VENICE server software, for example, from a remote computer connected via network. The `*.wsdl` file of the web service can be found in the directory `/var/opt/DVS/Venice/www/`.



Once the web service is enabled, the `*.wsdl` file can also be accessed by entering `http://<IP of VENICE>:<port>/?wsdl` in a web browser.

Further information about the web service can be found in an HTML file available in the directory `/opt/DVS/Venice/share/docs`.

To enable the web service perform the following:

- In the path `/etc/opt/DVS/Venice/` open the file `ControlWebService.conf` with a text editor.
- In section `[Server]` change the line `Enabled=false` to `Enabled=true`.
- Change the line `IpAddress=127.0.0.1` to the IP address which is set for the network port (see section “Configuring the IP Address of the Network Port” on page 6-9).



Make sure that the port number specified in the setting `Port` is not used anywhere else on the system. Otherwise you have to change it as well.

- Set the respective user in the section `[Username]`, otherwise the web service will be running as root user.
- Then save the file.
- Afterwards either reboot the VENICE server or restart the server software (see section “Controlling the VENICE Server Software” on page 6-15).

With this the web service will be enabled and the VENICE server software will receive commands sent to the system. Simply load the `*.wsdl` file into your web service application and heed the syntax descriptions in it.



VENICE supports the MOS protocol in its version 3.8.2, profiles 0, 2 and 5 for playout operations.

Furthermore, the software supports FIMS in its version 1.0.7 for ingest (capture) and transform operations.

## 6.14 Configuring the System for Special Workflows

For certain workflows, like recording with the record sheduler in Spycer or working with Avid iNEWS Command it is necessary to make different settings. To enable these workflows for the 'Superuser' or 'User', the 'Administrator' has to configure the software and, if necessary, some files in the system's folders. This is described in the following sections.

### 6.14.1 Configuring iNEWS Command

The Avid iNEWS Command feature allows you to easily connect the VENICE Media Production Hub to an Avid environment especially for news rooms and to carry out playout tasks on the VENICE server acting as a video server by using the iNEWS Command client software. Before you can start working, you have to connect the hardware and make several settings. How to connect the DVS and the Avid hardware and how to make basic configurations in the software is described in this section. How to configure the VENICE client software for a playout is described for the 'Superuser' in section "Configuring a Playout Project for iNEWS Command" on page 5-10. How to perform a playout using iNEWS Command is described for the 'User' in section "Avid iNews Command" on page 4-67.

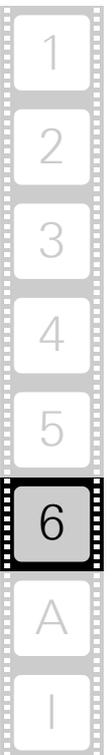
To configure iNEWS Command properly for the VENICE client software, the following must be present:

- the respective Avid hardware (e.g. iNEWS Command Servers, workstations that run the client software, Thunder production servers and Deko graphics system)
- the respective Avid software (e.g. Avid iNEWS Command client software)
- the respective DVS hardware (e.g. VENICE Media Production Hub)
- the respective DVS software (VENICE client software, Spycer software)
- the respective hard- and software documentation
- a terminal server (e.g. IOLAN terminal server)

Before installing iNEWS Command, please observe the following in particular:



The systems you are working on operate with voltages that can be hazardous to your health. Never work on the systems or access their interior with the power cable(s) being plugged in. Do not reach into any parts of the systems. Make sure the power supply is disconnected from the components you intend to work on.





Perform the installation and the connection of the Avid and DVS hardware with care. If you are not sure about the correct installation or operation, contact the DVS service department.



Further information about the systems and the software can be found in the documentation included in the delivery of the DVS system or in the Avid documentation.

## Hardware Installation

To connect the Avid hardware to the VENICE system, perform the following:

- Connect the IOLAN terminal to the VENICE systems as described in the “Avid iNEWS Command Installation and Configuration Guide”.
- Connect the IOLAN terminal using a RJ45 cable and a DB9 connector that is configured as described in the “Avid iNEWS Command Installation and Configuration Guide” to the serial RS-422 interface at the rear of the VENICE system (see the VENICE hardware guides).
- Now you can connect the systems to the power supply and put them into operation.



For further information about the correct startup and operation refer to the VENICE manuals as well as to the Avid documentation.

## Software Installation

To use the Avid iNEWS, some configurations in the Avid and the VENICE client software have to be made as described in the following:

- Open the “Avid iNEWS Command client software” and configure all settings according to the description in the “Avid iNEWS Command Installation and Configuration Guide”.

If all configurations are made properly, you can start working with the software as described in section “Avid iNews Command” on page 4-67.

### 6.14.2 Configuring Spycer for the Record Scheduler

Besides the record features in the VENICE client software it is possible to plan and set record jobs in Spycer, too. With the record scheduler in Spycer it is easy to manage several record jobs with a few clicks. When arriving at the set inpoint the VENICE server will start recording automatically. The record sheduler works with the FIMS standard (see <http://wiki.amwa.tv>). To configure the software for FIMS, the administrator has to make settings in the respective files which is described in the following section. Then the ‘Superuser’ has to create a project file that can be selected for the record operation in Spycer (see section “Projects”

on page 2-18) and the 'User' can start to work with the record scheduler (see section "Recording with the Record Scheduler" on page 4-43).



For further information about the correct installation and setup of Spycer please refer to the "Spycer" user guide.

When clicking the button **RECORD SCHEDULER** at the top of the Spycer user interface (from version 2.9.1 upwards), you will receive a system message that prompts you to add the FIMS services to your record scheduler. To perform this you have to create a configuration file and set it up properly. The file has to be saved to the folder as indicated in the system message. The system message is matched to the operating system running on your client.

- Use e.g. a code editor to create a configuration file `*.cfg` and name it as indicated in the system message, e.g. `fims_services.cfg`.
- Now add the server IP addresses and port numbers (alternatively host names and port numbers) you want to use the record scheduler for as follows to the file:

```
http://<IP address:port number>, +01:00
http://<IP address:port number>, +01:00
http://<IP address:port number>, +01:00
http://<IP address:port number>, +01:00
...
```



The addition of e.g. `+01:00` is important for the display in the record scheduler. When the time zone of your timecode signal differs from the time zone of your VENICE server you have to set the appropriate time for the timecode signal.

Winter/summertime changeovers have to be performed manually by entering `+02:00` instead of `+01:00` into the configuration file.

It is recommended to make synchronizations of server and client clocks at regular intervals.

After having saved the file `fims_services.cfg` to the folder, Spycer should now start without displaying the system message and FIMS should be added to the record scheduler.



How to perform record operations with the record scheduler in Spycer is described in section "Recording with the Record Scheduler" on page 4-43.



## 6.15 VENICE and STAN

On the VENICE server STAN, the Stereoscopic Analyzer, can be used to optimally align cameras for stereo shootings and 3D productions and to correct their output. It is a feature that is optionally available for a two-channel VENICE system only. To use VENICE with STAN the following setup should be used:

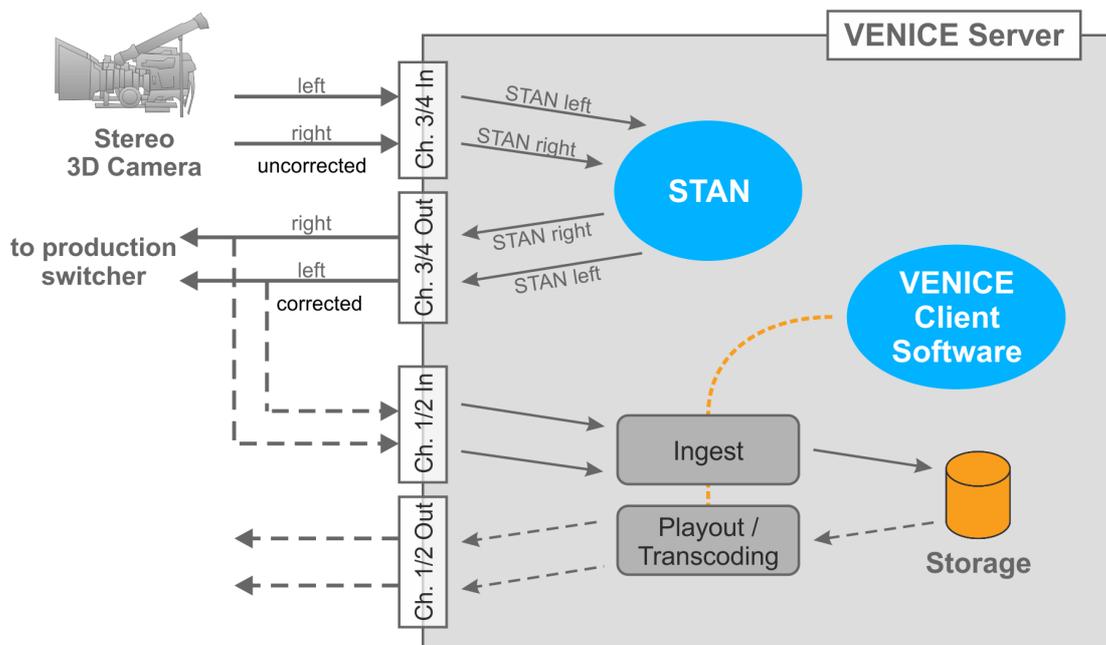


Figure 6-11: STAN setup

The input device set in STAN is one of the PCIe video boards of the VENICE server (see section “Setup Concept and Structure” on page 2-3). It is dedicated solely to STAN for the in- and output of 3D streams. Normally the video channel pair 3/4 of the VENICE server will be assigned to STAN. They will be labelled ‘STAN left’ and ‘STAN right’ at the system.

STAN automatically outputs the corrected stereoscopic stream on the respective output ports of the video channel pair. The latency of STAN between in- and output is just a few frames.

The corrected output streams can then be recorded via the second PCIe video board of the VENICE server (second video channel pair, normally 1/2). Afterwards the stereoscopic shot will be available, for example, for play-out or transcoding on the VENICE server or to be used with other applications that can access the recorded material.

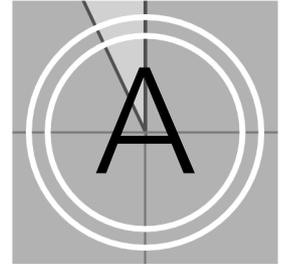
## 6.16 Troubleshooting

If you experience problems with the VENICE server, i.e. the system reacts only slowly to commands, check and delete the DNS entries stored on the system with the command line/system tools (e.g. via menu **System » Administration » Network**). If the problem persists, it is recommended to perform the procedure again and, additionally, to disable DNS completely on the VENICE server.





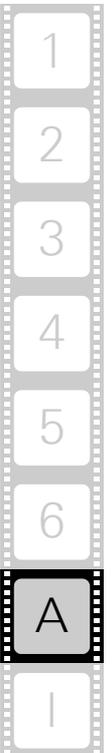
# Appendix



This chapter provides further information about the software. Among others you can find lists of the available keyboard shortcuts and the file formats that are supported directly by the DVS software.

## In this chapter:

Keyboard Shortcuts .....	A-2
Supported File Formats .....	A-4
RS-422 Control .....	A-9
States of an External Device .....	A-10
Supported VDCP Commands .....	A-11



## A.1 Keyboard Shortcuts

For a more easy and a faster control of the VENICE client software there are various keyboard shortcuts available which are listed in the tables below:



For the shortcuts to work the focus must be set correctly. It should be on the controls in general or the scrub/shuttle bar.

**Table A-1: General keyboard shortcuts**

Action	Shortcut
Opens a HTML page with the product related manuals.	[F1]
Edits a column entry in a list of the list editor.	[F2]
Opens the option 'Configuration' of the menu 'Options'	[F4]
Update list (channel connection tab)	[F5]
Switch between operation modes	[Ctrl + Shift + TAB]
Switch between player/recorder controls	[Ctrl + TAB]
Creates a new project	[Ctrl + N]
Opens an already existing project	[Ctrl + O]
Opens a directory window and saves the project	[Ctrl + S]
Exits the software	[Ctrl + Q]
Opens the 'About' window	[Ctrl + H]
Start record (crash and autoedit)	[Ctrl + Shift + R]
Play (speed 1)	[Space], [5], [']
Play (speed x1, x2, x4, x8)	[L]
Stop play (speed 0)	[Space], [K]
Step one (1) frame backward	[Left Arrow], [3], [.]
Step one (1) frame forward	[Right Arrow], [4], [.]
Fast stepping (5) frames backward	[Left Arrow + Shift], [1]
Fast stepping (5) frames forward	[Right Arrow + Shift], [2]
Set inpoint	[E], [I]
Set outpost	[R], [O]
Delete inpoint	[D]
Delete outpost	[F]

**Table A-1: General keyboard shortcuts (cont.)**

Action	Shortcut
Delete in- and outpoint	[G]
Go to inpoint	[O]
Go to outpoint	[W]
Append to list	[B]
Copy current main timecode text to the system clipboard	[U]

**Table A-2: Keyboard shortcuts for VENICE**

Action	Shortcut
Reverse playout (speed ×1, ×2, ×4, ×8)	[J]
Stop reverse play (speed 0)	[Space], [K]
Go to previous point	[Home], [A]
Go to next point	[End], [S]

**Table A-3: Keyboard shortcuts for the external device**

Action	Shortcut
Eject tape	[N]
Fast backward	[1], [M]
Fast forward	[2], [I]
Stop fast backward/forward	[Space]



## A.2 Supported File Formats

The DVS software supports over 100 graphic and image file formats. Most are made available by a special library. For a list of all these file formats see <http://www.xnview.com/old/en/formats.html>.

The tables in the following list most of the file formats that are supported by the DVS software directly. Some are video or audio-only file formats and some are container file formats that contain audio as well as video.



Some of the file formats (especially the uncompressed ones) can be used with a single video channel of the VENICE server only. A simultaneous processing with a further video channel may lead to drops.

Some formats may be only available when special licenses are set. Please contact the DVS service department in case of license issues.

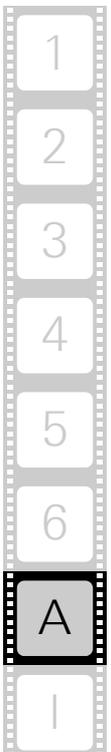
### Video-only File Formats

The following video-only file formats (still image formats) are supported by the VENICE server:

Format Name	Default Extension	File storage format	Description
BMP	*.bmp	3 × 8 bit RGB and 4 × 8 bit RGBA	8 bit RGB file format with or without key. Windows bitmap format. Only uncompressed bitmaps are supported (no RLE compression).
Cineon <sup>1</sup>	*.cin	3 × 10 bit RGB	10 bit RGB format. Subset of the ANSI/SMPTE DPX file format. Flexible file format by Kodak, allowing for variable image headers.
DPX <sup>1,2</sup>	*.dpx	3 × 8 bit RGB and 4 × 8 bit RGBA	8 bit RGB file format with or without key. SMPTE Standard File Format for digital moving-picture exchange.
		8 bit YUV 4:2:2 and YUVA 4:2:2:4	8 bit YUV file format with or without key. SMPTE Standard File Format for digital moving-picture exchange.
		3 × 10 bit RGB and 4 × 10 bit RGBA	10 bit RGB file format with or without key. SMPTE Standard File Format for digital moving-picture exchange.
		10 bit YUV 4:2:2 and YUVA 4:2:2:4	10 bit YUV file format with or without key. SMPTE Standard File Format for digital moving-picture exchange.
		3 × 12 bit RGB	12 bit RGB file format. SMPTE Standard File Format for digital moving-picture exchange.
		3 × 16 bit RGB	16 bit RGB file format. SMPTE Standard File Format for digital moving-picture exchange.

Format Name	Default Extension	File storage format	Description
Targa	*.tga	3 × 8 bit RGB, 4 × 8 bit RGBA and 8 bit Luma	Targa image format. Only uncompressed variants of this format are supported.
TIFF	*.tif *.tiff	3 × 8 bit RGB, 4 × 8 bit RGBA and 8 bit Luma	TIFF or Tagged Image File Format in 8 bit RGB with or without key. Highly flexible and platform-independent image format. Not all variants of this format are supported.
		3 × 12 bit RGB, 4 × 12 bit RGBA and 12 bit Luma	TIFF or Tagged Image File Format in 12 bit RGB with or without key. Highly flexible and platform-independent image format. Not all variants of this format are supported.
		3 × 16 bit RGB, 4 × 16 bit RGBA and 16 bit Luma	TIFF or Tagged Image File Format in 16 bit RGB with or without key. Highly flexible and platform-independent image format. Not all variants of this format are supported.
YUV	*.qnt *.qtl *.yuv *.yuv8  *.yuv10	8 bit YUV 4:2:2	Raw 8 bit YUV file format. <sup>3</sup> This file has no header. The image format is recognized by the file size. This is done with a table of predefined file sizes. Component order UYVY.
		10 bit YUV 4:2:2	Raw 10 bit YUV file format. This file has no header. The image format is recognized by the file size. This is done with a table of predefined file sizes. Component order UYVY. Bits are packed tightly from left to right for three component samples, then two bits of padding (zero) to fill up to four bytes. The lines are padded to a multiple of four bytes. The file is padded to a multiple of 512 bytes.
		16 bit YUV 4:2:2	Raw 16 bit YUV file format. <sup>4</sup> This file has no header. The image format is recognized by the file size. This is done with a table of predefined file sizes. Each component is stored as a 16 bit value in big-endian byte order (left-aligned). Component order UYVY.

- 1) DVS saves files of this format by default in big-endian byte order. However, for a playout both formats (little- and big-endian byte order) are supported.
- 2) Regarding the file type: V2 is the DPX file format according to SMPTE 268M-2003, the remaining (V1) are SMPTE 268M-1994. 'b.e.' stands for big endian, 'l.e.' for little endian.
- 3) 8 bit YUV422: 8 bit per component, 16 bit average per pixel.
- 4) 16 bit YUV422: 16 bit per component, 32 bit average per pixel.



## Container File Formats

The DVS software supports the following container file formats for audio and/or video material:

Format Name	Default Extension	File storage format	Description
GXF	*.gxf	MPEG or DV-based video compression standards, with audio, timecode, and user data that may include metadata	File exchange format for the transfer of clips between storage systems.
MPEG-2	*.mpg *.mts *.m2ts *.ts	3 × 8 bit RGB or 8 bit YUV (compressed and/or audio)	File format for the compression of video and audio.
H.264 (MPEG-4, layer 10)	*.mp4	AVC (high profile 4:2:2) H.264	Compression format for video and audio capable of providing good video quality (e.g. when in HD) at lower bit rates. Standard delivery format for web-based content.
QuickTime	*.mov	Various (e.g. RGB or YUV either compressed or uncompressed + audio) like e.g. AVC-Intra 50/100, ProRes 422 (HQ, LT and Proxy)/4444, DNxHD (8 and 10 bit), DV 25, DVCPRO 25/50, DVCPRO HD100, IMX 30/40/50, XDCAM HD 25/35/50 and XDCAM EX 35	Video file format that supports various file storage formats, either compressed or uncompressed. It is a proprietary streaming video technology developed by Apple.



VENICE supports embedded closed caption information stored in QuickTime by Apple. It records embedded CEA-708 information from the incoming SDI signal in digital SD and HD. Furthermore, closed captions are stored in MXF OP-1a files as defined in the SMPTE 436M standard and in GXF files as well. The closed captions are preserved while head and tail cutting. Then they can be played out to SDI again.

Recording of EIA-608 information in SD is not supported.

If transcoding one file format into another file format, the closed caption information could be lost.



Please heed the following limitations for QuickTime files:  
 For QuickTime files containing audio (audio only as well as video + audio) the maximum duration for ingesting and transforming these files is 12 hours.

For QuickTime files containing video only the maximum duration for ingesting and transforming these files is 24 hours.

Ingesting and transforming other file formats is limited to 24 hours as well.

Please note that disregarding the limitations may lead to performance losses or malfunctions of the respective channel(s).

Furthermore, the software supports different variants of MXF (e.g. MXF OP-Atom, MXF OP-1a and P2; extension \*.*mx£*) as well as DV (DIF; extension \*.*dv*) files. Both are container formats for audio and/or video material. P2-3D clips can be read and played out by the software, too. The formats are implemented with the following compression codecs:

Codec	Video Raster <sup>1</sup>	Video Bit Rates	Audio Bit Depth <sup>2</sup>	Format
AVC-Intra	720p /23.98/25/29.97/50 /59.94, 1080i /25/29.97, 1080p /23.98/25/29.97/	50, 100	16 bit	MXF OP-1a, MXF OP-Atom (P2)
AVC-Intra Class 200	720p /23.98/25/29.97/50 /59.94, 1080i /25/29.97, 1080p /23.98/25/29.97/	200	16 bit (e.g. in MXF OP-Atom (P2), further bit depths in other formats)	MXF OP-1a, MXF OP-Atom (P2)
DV25	486i /29.97 (4:1:1), 576i /25 (4:2:0)	25	16 bit (e.g. in DV (DIF), further bit depths in other formats)	DV (DIF), GXF, MOV, MXF OP-1a (DV), MXF OP-Atom (P2), MXF (for Isis &...)
DVCPRO 25	486i /29.97 (4:1:1), 576i /25 (4:1:1)	25	16 bit (e.g. in DV (DIF), further bit depths in other formats)	DV (DIF), GXF, MOV, MXF OP-1a (DV), MXF OP-Atom (P2), MXF (for Isis &...)
DVCPRO 50	486i /29.97, 576i /25	50	16 bit (e.g. in DV (DIF), further bit depths in other formats)	DV (DIF), GXF, MOV, MXF OP-1a (DV), MXF OP-Atom (P2), MXF (for Isis &...)



Codec	Video Raster <sup>1</sup>	Video Bit Rates	Audio Bit Depth <sup>2</sup>	Format
DVCPRO HD	720p /50/59.94, 1080i /25/29.97 1080p /25/29.97	100	16 bit (e.g. in DV (DIF), further bit depths in other formats)	DV (DIF), GXF, MOV, MXF OP-1a (DV), MXF OP-Atom (P2), MXF (for Isis &...)
DNxHD	720p /23.98/25/29.97 /50/59.94, 1080i /23.98/24/25 /29.97, 1080p /23.98/24/25 /29.97/50/60	Various, ranging from 36 to 440	16 bit (e.g. in MXF OP-Atom (P2), further bit depths in other formats), 24 bit <sup>3</sup>	MOV, MXF OP-1a (Avid), MXF OP-Atom (Avid), MXF (for Isis &...)
DNxHD 444	1080p (4:4:4, 10 bit)			MXF OP-1a MXF OP-Atom
XDCAM EX	720p /50 1080i /25 1080p /25	35	16 bit	MXF OP-1a
XDCAM IMX	486i /29.97, 576i /25	30, 40 or 50	16 bit, 24 bit	MXF OP-1a
XDCAM HD	1080i, p /25/29.97 (4:2:0)	18, 25, 35	16 bit	MXF OP-1a
	720p /50/59.94, 1080p /23.98/25/29.97, 1080i /25/29.97	50	24 bit	MXF OP-1a (Avid) incl. ANC
XDCAM DV	486i /29.97 (4:1:1), 576i /25 (4:2:0)	25	16 bit	MXF OP-1a

- 1) If not mentioned otherwise all in 8 bit 4:2:2.
- 2) The number of channels that can be recorded as well as their arrangement may be restricted.
- 3) Each audio channel will be recorded in a separate file. Recording 16 audio channels will generate 16 individual MXF files for audio (mono).



2K rasters are realized with uncompressed file formats that can be selected in the configuration options (see section “Configuration Options” on page 3-18).

Please observe that there are hardware limitations regarding the in- and output of 2K, 4:4:4, AVC-Intra and uncompressed video material. On some VENICE hardware variants the channel number supporting simultaneous in- and output of these contents may differ.

## Audio-only File Formats

The following uncompressed audio-only file formats are supported by the DVS software:

Format Name	Default Extension	Description
AIF AIFF	*.aif *.aiff	Audio interchange format. Platform-independent file format for sound. Capable of storing multiple mono or stereo channels.
BWF	*.rf64 *.wav	Broadcast wave format. Platform-independent file format for sound. Extension of the Wave format capable of storing multiple mono or stereo channels together with metadata and enabling file sizes of more than 4 GB.
Wave	*.wav	File format for digital audio (waveform) data under Windows. Capable of storing multiple mono or stereo channels.

## A.3 RS-422 Control

The VENICE server provides one remote control port for each channel. Its direction (In/Out, i.e. its pin-out) is determined by the state of the remote control in the VENICE client software (i.e. on = remote, off = master).

For remote mode the DVS system supports the RS-422 9-pin control protocol, VDCP (RS-422) and MOS (Ethernet). When acting as a master, the DVS system uses the RS-422 9-pin control protocol.

In case you want to control the DVS system in remote mode via RS-422, the following specifications have to be set on the master device to ensure frame accurate editing:

preroll	>= 1 sec.
edit lag (edit delay)	7 frames
postroll	1 sec.



## A.4 States of an External Device

An externally connected device can go into different states that are all shown in the **SLAVE STATE** field of the user interface (see section "Message and Information Area" on page 3-21). You can control an external device via the remote output of the DVS system, such as telecines, VTRs or digital disk recorders. The following shows the most important statuses that will be displayed by the DVS software:

OFFLINE	No external device connected
STANDBY	Device is in standby mode
LOCAL	External device is controlled from its own operation panel; all RS-422 commands are ignored
STILL	Tape has stopped but is still threaded with the video drum head turning (standby on)
STOP	Tape has stopped and is unthreaded, the video drum head has stopped as well (standby off)
EJECT	Device is ejecting the tape
REWIND	Tape is rewound
FORWARD	Tape is fast forwarded
RECORD	Device is recording
PLAY	Device is playing out
JOG	Tape is forwarded or rewound (speeds ( $\pm$ ) 0.1 to 1)
SHUTTLE	Tape is fast forwarded or rewound (speeds ( $\pm$ ) 1.1 to 10)
PREROLL	Device is performing the preroll

Additionally, some error messages are available and the following ones can be displayed by the DVS software:

TAPE UNTHREAD	No tape loaded
TAPE TROUBLE	A tape error has occurred
HARD ERROR	A hardware error has occurred

## A.5 Supported VDCP Commands

The VENICE server can be remotely controlled via VDCP. The following VDCP commands are supported by VENICE:

Command			Return		
CMD-1	CMD-2	Description	CMD-1	CMD-2	Description
10	00	Stop		04	ACK
10	01	Play		04	ACK
10	02	Record		04	ACK
10	04	Still		04	ACK
10	05	Step		04	ACK
10	06	Continue		04	ACK
10	07	Jog		04	ACK
10	08	Vari.Play		04	ACK
20	21	ClosePort		04	ACK
20	22	SelectPort		04	ACK
20/A0	24	PlayCue		04	ACK
20/A0	23	RecordInit		04	ACK
20/A0	25	CueWithData		04	ACK
20/A0	2C	RecordInitWithData		04	ACK
30	01	OpenPort	30	81	Grant
30/B0	02	Next	30/B0	82	NextID(s)
30	05	PortStatusRequest	30	85	Status
30	06	PositionRequest	30	86	Position
30/B0	07	ActiveIDRequest	30/B0	87	ActiveID
30	08	DeviceTypeRequest	30	88	DeviceType
30	10	SystemStatusRequest	30	90	SystStatus
30/B0	11	ListofID(s)	30/B0	91	FirstIDs
30/B0	14	IDSizeRequest	30/B0	94	IDSize
30/B0	16	IDRequest	30/B0	96	IDPresence
30/B0	18	IDsAddedListRequest	30/B0	98	IDsAddedList
30/B0	19	IDsDeletedListRequest	30/B0	99	IDsDeletedList



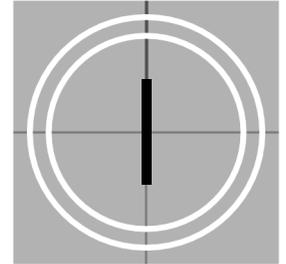
VENICE currently supports one channel per port, so commands such as OpenPort, SelectPort or ClosePort can only be used with 1. Any not supported command will return an ACK reply and set the 'Not Supported' status bit.

Additionally, there are DVS extensions to the VDCP commands available. For further information about them please contact DVS directly.





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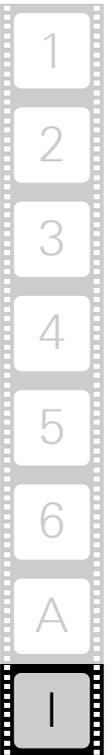
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