

# ***DDClip***

*Non-destructive multitrack real-time  
audio and video editor*

**Version 2.23**

## **User's Guide**

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# 1 Introduction

## 1.1 DDClip Features

DDClip is non-destructive multitrack real-time audio and video editor.

DDClip is designed for projects where multimedia data have to be combined and processed for final presentation - to score video, to synchronize voice with music, to create audio commercials and others.

DDClip operates with multimedia data in form of “clip” and does not change original content of source files. “Clip” contains a reference to a continuous fragment of audio or/and video data from source file (clip may reference a whole file content). It may be a number of nonoverlapping clips on a track.

DDClip is able to mix sound tracks in real time. This opportunity to get immediate feedback to changes made in project makes DDClip an efficient editing tool. Playback may be started at any time and for any part of project, any group of clips or tracks.

With DDClip, it is easy to add clip to one of the project tracks, change relative or absolute time position of a clip on or group of clips. Audio clips may have volume and/or balance profiles, in addition to general volume and balance levels for project and each clip. Fade may have special profile. Clips may be crossfaded. It is possible to write from microphone or other external source simultaneously with playback.

A short summary of DDClip features:

- video playback at any device supported by Video for Windows,
- track for MIDI,
- up to 16 tracks for audio,
- audio mixing in real time,
- solo/mute toggles for each track, available in real-time,
- volume and balance profiles for each clip on a track,
- multilevel Undo/Redo for editing features,
- context sensitive local menu on right-click with mouse.

Audio files may be in WAVE or AIFF formats (usually they have filename extensions .WAV, .AVI, .AIFF, .AFF). A project should contain audio files with same ratio. DDClip may convert initial material to same ratio when opening a clip.

The application works with one project at a time, project may be saved and restored (file with filename extension .TML). Each project may have corresponding clip collection file with extension .PRC.

## *1. Introduction*

### **1.2 Style conventions**

Following style conventions are used in this guide:

*Italics* is used for names of windows, dialogs, buttons and various components.

Typically, description of these elements may be found in section with similar name.

**Boldfaced regular text** is used to emphasis important features.

**Bold text without serifs** is used for menu items, names of panels and labels in dialogs.

## 2 Installation and Registration

### 2.1 Installation

To install the software run *SETUP* program on DDClip CD-ROM.

This can be done in two ways:

**Using the Windows Explorer:**

1. Double-click **My Computer** icon on desktop.
2. Double-click icon for the CD-ROM drive.
2. Find the program *SETUP.EXE* in the list of files in the directory window.
3. Double-click on it.

**Using the Run command:**

1. Click the **Start** button on the Windows 95 taskbar.
2. Click **Run** command
3. In the **Open** box field type the drive letter of the installation media followed by colon, back-slash and *SETUP.EXE* (e.g. *E:\SETUP.EXE*, if your CD-ROM drive mapped on *E:*) or use the *Browse* button to locate and select *SETUP.EXE*.
4. Press **Enter**.

The setup program screens are self-explanatory. Follow the instructions to specify the destination directory and the software components to be installed. The setup program automatically creates the *DDClip* software group and the program items and updates the system registry database with the necessary keys and values. This completes the installation process and you are now ready to run the installed *DDClip* software.

**Note:** The *Typical* software installation includes basic DDClip software and sample project. The *Compact* installation option installs only basic DDClip software the required low and medium level drivers for the DDClip.

**Note:** During installation process program may complain that it could not find temporary directory. Choose existing subdirectory or create new subdirectory that will be used as temporary (for example *C:\TEMP*). Then add following line to *AUTOEXEC.BAT* file, located in first hard drive root directory (assumed that you want to use *C:\TEMP* as temporary directory and it directory exists):

```
SET TEMP=C:\TEMP
```

Then restart computer. When you finish with installation you may remove the line that you have add to *AUTOEXEC.BAT* file.

### 2.2 Registration

Click **About...** on **Help** menu in application window, then click on *Register now* button in dialog. In appearing dialog type in *CD-Key1* and *CD-Key2* numbers and press *OK*. *CD-Key* numbers must be labeled on your CD-ROM box.

## *2. Installation and Registration*

If the program shows error message then check *CD-Key1* and *CD-Key2* strings and click *OK* again.

### **2.3 Uninstall**

To uninstall click the **Start** button on the Windows 95 taskbar, then click **Programs**, then **DDClip** and **Uninstall DDClip**. Or run **Add/Remove Programs** from Windows 95 *Control Panel*, then select **DDClip** and click on *Add/Remove...* button.



## 3 Overview

### 3.1 Clip. What does it mean?

Application operates with multimedia data in form of “clip” and does not change original content of source files. “Clip” contains a reference to a continuous fragment of audio or/and video data from source file (clip may reference a whole file content). It may be a number of nonoverlapping clips on a track.

### 3.2 Quick start

At first, read carefully chapter 2 where described how to install (and uninstall) and register application.


When application is launched general hints are – watch out *cursor shape*, call context sensitive *local menu* with right mouse button click, use *Toolbar* buttons. *Settings* dialog may help you to discover new features and tailor application behavior to your needs (to call dialog use *Toolbar* button or **Options** menu). Short summary of basic operations with clip is in chapter 9.

The same editing commands and options may be available through global menu item, toolbar button, accelerator key and local menu.

To get local menu called right-click on component.

To learn for what *Toolbar* button is for, you can rest your mouse pointer on the button for a few seconds. Windows displays the button name.

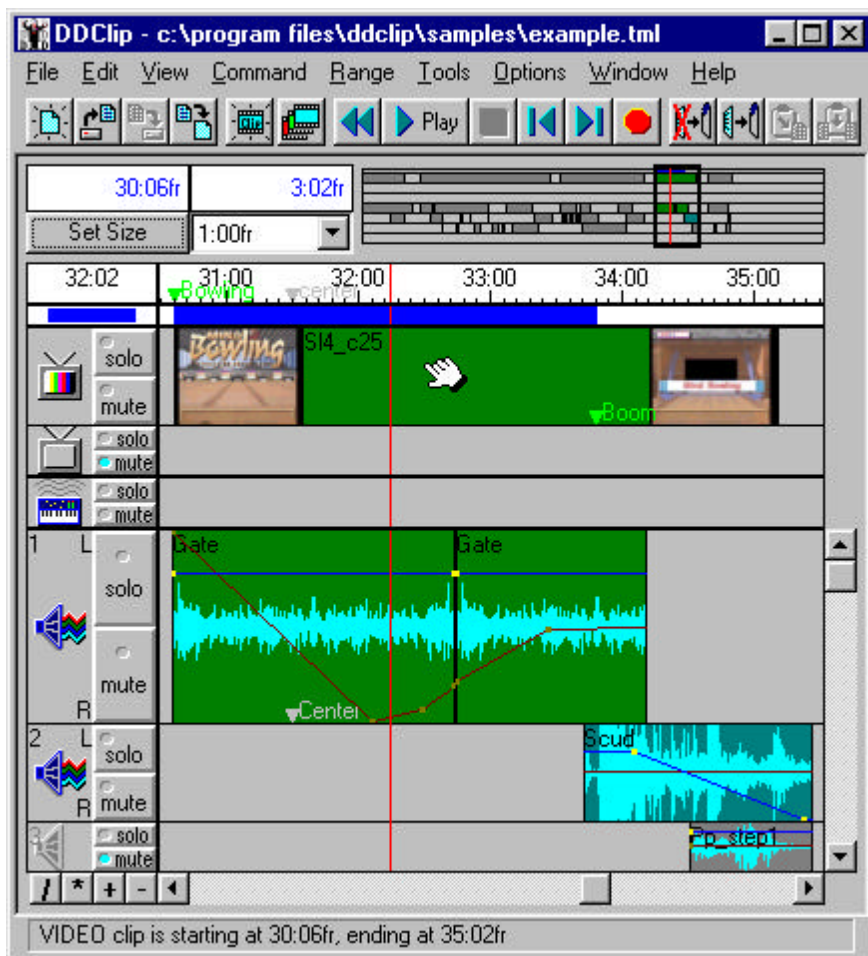
Accelerator keys are displayed at right in global menu items. Complete list of accelerator keys may be found in chapter 9 and in on-line help.

An alternative or compliment to this book reading is on-line help. It is available from Help menu. Overview pictures of two application basic windows, *Project* window and *Clip Collection* window, have links to component's descriptions. Click over component when standard Windows help cursor change it's shape to .

*Project* window contains all data and tools for project editing. *Clip Collection* window may be considered as a handy storage for references to audio and video sources. Dedicated chapters in this manual describe each window and various dialog windows in details. Separate chapter describes *Settings* dialog.

### 3. Overview

## 3.3 Project Window



**Figure 1 Project Window**

Project window is a main application window. Typical layout is shown in Figure 1. Project window title bar contains application name 'DDClip' and path to project file or 'Untitled'. Global menu provides accesses to commands and options. Toolbar presents most frequently used commands.

Project window has *Working Area*, where parts of project tracks with clips are available for editing. Each track to the left of *Track Working Area* has *Track State* window with track type icon and *Solo*, *Mute* buttons, which control track inclusion in playback. Clip on a track is displayed as rectangle with clip name in top left

corner. Rectangle height is equal to track height, width is determined by clip duration. Clip background color depends on *Clip Selection* state. Clips of different types have type specific features.

All tracks and clips of a project are schematically presented in *Project Overview* window. *Time Ruler* provides a project time reference for *Working Area*.

Two vertical red lines, one which cross *Time Ruler*, *Range window* and tracks in *Working Area*, and one in *Project Overview* window visually represents current time position. *Current Time* window show it's value.

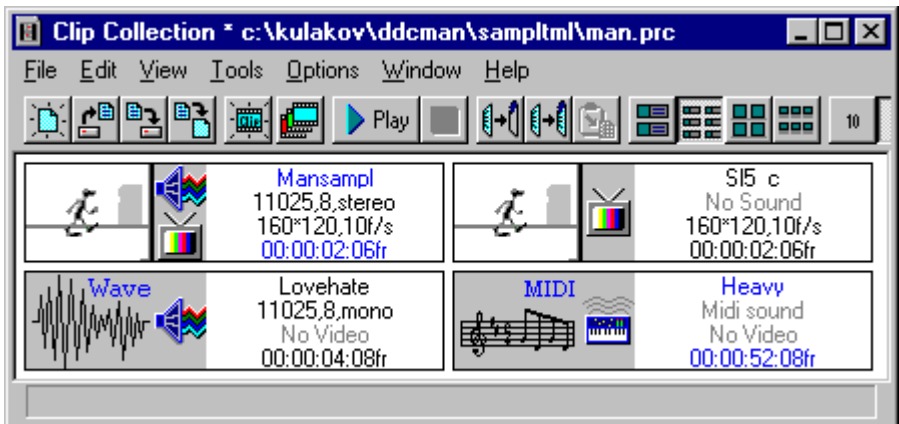
Right-click on different components displays a context sensitive **local menu**.

Status line at window bottom displays various information while moving around with cursor.

All mentioned above and other Project window components are described in sections of this chapter. Chapter 9 contains summary of basic clip management operations, toolbar buttons descriptions and list of accelerator keys.

Project window supports Drag&Drop option for source files. ONE file at ones may be dropped and placed on a track of appropriate type.

### 3.4 Clip Collection and other windows



**Figure 2 Clip Collection Window**

Clip Collection may be considered as a handy storage with references to audio and video data. Each clip is represented by *Clip Info* window. Clips from Clip Collection can be dragged to *Project* window and back. Source files also can be dragged from Windows Explorer window. When new source file is opening, a new *Clip* with reference to whole file content is added to Clip Collection. Chapter 8 describes Clip Collection in more details.

Various dialogs can be called with commands on global and local menus. Some of them shortly described below.

### 3. Overview

Master volume and balance for project and audio tracks may be set in window, that available with **Audio meter (Faders)** command on *Project* window **Window** menu. Window also contains output volume indicator. Section 6.8.1 describes this window in details.

Section 4.8 describes other *Volume and Balance* dialogs.

*Audio Recorder* dialog allows to write from microphone or other external source. This can be done simultaneously with playback, if sound device support this feature. Dialog described in section 6.4.1.

In *Set Size* dialog, section 5.8, in particular project duration and number of audio tracks in project can be changed.

In *Fade Profile* dialog, section 6.7.1, shape of fade profile may be changed.

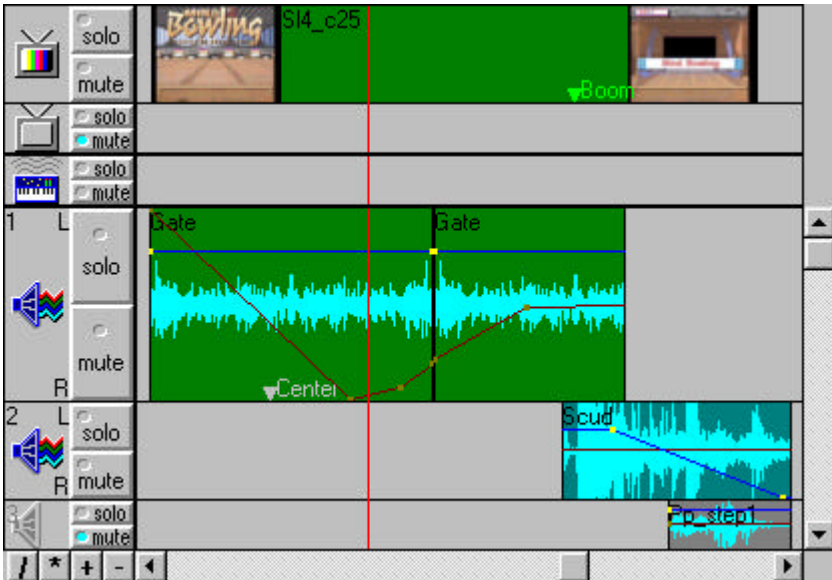
Clip name and other clip parameters can be viewed and changed in *Edit Clip* dialog, see section 4.3.1, and *Clip Properties* dialog, section 8.3.

### 3.5 Clipboard

Clips in Clipboard preserve their relative time position and track number. Each **Cut/Copy** command clears previous Clipboard contents. **Copy/Add** commands from *Clip Collection* window add clips to first track only.

## 4 Project Window Working Area

### 4.1 Working Area overview



**Figure 3 Working Area.**

*Working Area* represents project tracks with clips within specified time interval. Interval bounds can be easily changed or redefined in *Project Overview* window, where this interval is represented as bold black frame. In *Set Size* dialog values for left and right bounds can be viewed or redefined. *Working Area* position relative to project start and end project may be changed with horizontal scrollbar at bottom. To the left of scrollbar zoom buttons are located, **Zoom In (+)**, **Zoom Out (-)**, **Zoom to Project (I)** are also available in **View** menu, **Zoom in range (\*)** in **Range** menu.

Vertical red line visually represents current time position.

In **View** menu items **Show Video** tracks, **Show MIDI** track and **Show Audio** tracks control which types of tracks are presented in *Working Area* window. Vertical scrollbar to the right of area occupied by audio tracks appears if not all audio tracks fit in window.

Each track at its left has *Track State* window with track type icon and **Solo** and **Mute** buttons.

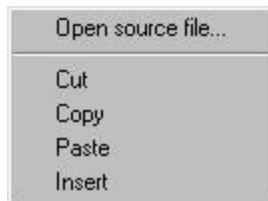
“Clip” represents a continuous fragment of multimedia data from source file, in particular clip may reference a whole file content. Clip also may have specific properties such as volume and balance profiles for Audio clip.

## 4. Project Window Working Area

Clip on a track is displayed as rectangle with clip name in top left corner. Common features and specific properties of Video/MIDI/Audio clips are described in sections of this chapter.

Right-click in area, which is not occupied by clips, calls local menu with following items.

Open source file ... call *Open Clip* dialog and add clip with reference to whole file content to project and *Clip Collection*. File menu has identical item, please refer to menu description for more details.



Cut. Copy. Paste. Insert. operations with selected clip(s). Identical to items with same names on *Edit* menu, see menu description for more details.



### 4.2 Track State window







*Track State* window at the left of each track in *Working Area* has **Solo** and **Mute** toggle buttons and icon, which is specific for each type of tracks. Track may be of Double, Normal, Half heights and a fourth of normal size in special 'locked' state.

Track may be included in or excluded from playback. Excluded track icon is 'grayed' and some picture details are removed, icons pairs presented below.



  - 'Solo' track always included in playback. Note that not 'solo' tracks are automatically excluded from playback ('grayed'), if there are 'solo' track(s). Exclusive "Solo" switch in *Selection Settings* dialog control if 'solo' may be set for only one or for many tracks.

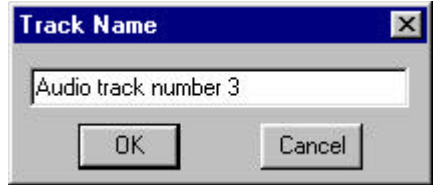
  - 'Mute' track excluded from playback (icon 'grayed').

  - Neither 'solo' or 'mute' track included in playback, if there is no 'solo' track.

## 4. Project Window Working Area

Audio tracks may also have ‘L’ and ‘R’ at top and bottom, if **Stereo** mode is set for project in **Audio** tab of *Settings* dialog. These signs provide reference for balance profile in *Audio Clip*.

Track name is displayed in status line at *Project* window bottom while cursor is located in *Track State* window. *Track Name* dialog called from with **Name** item in local menu. Predefined names typically indicate track type and number inherited from initial enumeration of project tracks of that type.



Relative positions of tracks of the same type may be changed with **Move up** and **Move down** commands in local menu. Note that first (top) video track has priority over second video track during playback. Audio tracks have number in upper left corner, which reflect current audio track enumeration from top to bottom. This number is useful reference when not all tracks fit in window and vertical scrollbar is used.

Right-click in whole window region or click in icon calls local menu with items described below. Note that **Track Volume** appears only for Audio and MIDI tracks.

**Name** call *Track Name* dialog, see above, to change track name.

**Move up** swap this and upper track positions.

**Move down** swap this and lower tracks positions.

**Double height** display with twice normal height.

**Normal height** display with normal height.

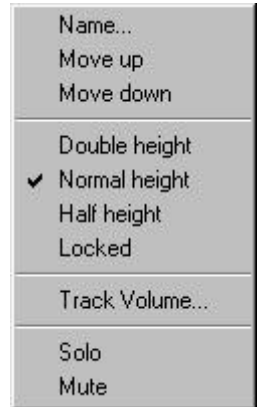
**Half height** display with half of normal height.

**Locked** display with quarter of normal height. Clips on ‘locked’ track can not be selected and manipulated with mouse, see also *Clip Selection*.

**Track volume** change track volume in special dialog window, see also sections 4.8 “*Volume* and *Balance* dialogs” and 6.8.1 “*Audio meter (Faders)* windows”.

**Solo** always include in playback, same as **Solo** toggle, see above.

**Mute** exclude track from playback, same as **Mute** toggle, see above.



Height for all Audio tracks may be set from **View** menu, **Audio tracks height**.

### 4.3 Clip on a Track



Clip on a track is displayed as rectangle with clip name in top left corner. Rectangle height is equal to track height, width is determined by clip duration. Clip background color depends on *Clip Selection* state. Clips of different types have specific features described in separate sections. Clip operations are summarized in chapter 9.

## 4. Project Window Working Area

Right-click calls local menu that has to two groups of items at top and bottom. Items that are described below are common for all clip types. In Figure at right MIDI clip local menu is presented as sample, **Tempo** and **Clip volume** are specific for MIDI.

<b>Play clip</b>	playback only this clip.
<b>Delete clip</b>	delete this clip.
<b>Edit clip parameters</b>	call <i>Edit Clip</i> dialog, see below.

<b>'Clip type' editor</b>	actual item name depends on clip type and may be <b>Video editor</b> , <b>Audio editor</b> , <b>Midi editor</b> . Editor application is launched with the clip source file name added to command line. 'Editor' path may be set in <i>Configure external applications</i> dialog ( <b>Configure</b> on <b>Tools</b> menu).
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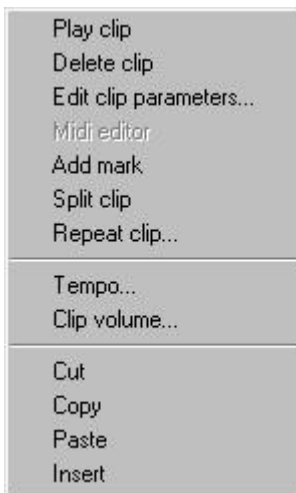
<b>Add mark</b>	set <i>Place mark</i> at specified position. Near place mark cursor change its shape to  Mark. If local menu is called near already set place mark when cursor has  Mark shape then <b>Add mark</b> is replaced by three items - <b>Set mark position</b> , <b>Mark name</b> and <b>Remove mark</b> . See section 5.3 "Place marks" for more details.
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<b>Split clip</b>	split clip in two parts at specified position, see <b>Edit</b> menu, <b>Split</b> for more details.
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<b>Repeat clip</b>	call <i>Repeat Clip</i> dialog, see below.
--------------------	--

Following commands are identical to items in **Edit** menu, see corresponding section for more detailed description.

<b>Cut</b>	cut selected clips to Clipboard.
<b>Copy</b>	copy selected clips to Clipboard.
<b>Paste</b>	add all clips from Clipboard to project starting at specified position.
<b>Insert</b>	split all clips at specified position, shift them and insert clips from Clipboard in this gap. If there is video data then current time and gap width aligns to frame boundaries.





### 4.3.1 Edit Clip dialog

Clip local menu command **Edit clip** parameters calls this dialog.

**Clip Name** is an arbitrary label that may be assigned to a clip. By default, name of source file is assigned. Clips with different parameters may have same name. Clip Name does not identify clip uniquely.

**File Name** show path to source file.

“Source position” group fields presents in time format selected in **View** menu values of following parameters:

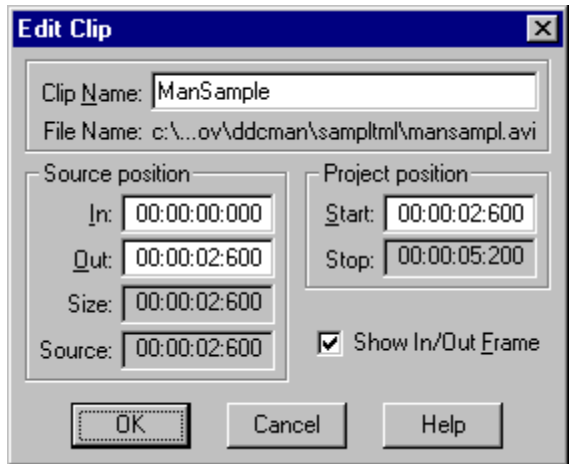
**In, Out** – begin and end of clip relative to source file start position.

**Size** – clip duration, effectively difference between **Out** and **In**.

**Source** – duration of whole source file data.

**Start** and **Stop** are start end stop clip positions in project.

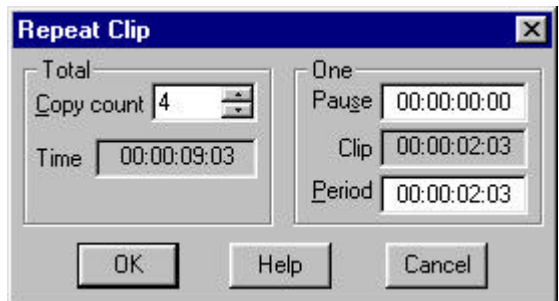
**Show In/Out frame** is identical to **Show video** in *General Settings* and *Time Ruler* local menu. It controls if corresponding frame is displayed on videoplayer (*Video* window) while you change **In** or **Out** fields. Has meaning and available only for Video clip.



### 4.3.2 Repeat Clip dialog

Clip local menu command **Repeat clip** calls this dialog. Each created copy became an independent clip, but initially clips except position in project are identical. This is true not only for general properties such as clip duration, position in source file, place marks, but also for clip type specific such as volume and balance profiles for Audio clip.

Values of time position or time interval presented in time format selected in **View** menu.



## 4. Project Window Working Area

**Copy count** sets the number of new copies. For example with counter value 4 there will be 5 identical clips.

**Time** shows value for time interval occupied by new created repeated units, 'period' multiplied by number of copies.

**Pause** sets duration of pause before each new copy.

**Clip** shows clip duration.

**Period** sets total duration of unit 'pause + clip' that will be repeated.

All parameters max values depend on free space after clip and are interdependent. Beware that arbitrary values may be set while doing field editing. But sum of **Pause** and **Clip** can not exceed **Period**. **Period** interval can not be set larger, if there is no enough space for **Copy count** number additional copies, etc. It is recommended to switch to another field with mouse of **Tab** key to see actual field value and then press **OK** button.


Note that if time is measured in frames or SMPTE (see **View** menu), time interval value is rounded to nearest frame start time. This may be a little bit misleading. In figure above dialog was called for project with rate 10 frames per second and after simple multiplication value '00:00:09:02' may be expected for **Time** field. To see that everything is consistent choose **Time in milliseconds** selected in **View** menu.

### 4.4 Clip Selection

**Delete**, **Move**, **Cut**, **Copy** and some other operations operate with currently selected clip or with group of selected clips.

Background color of rectangle that represents clip on a track depends on clip selection state. Clips in current selection group are displayed in dark green. Clips of other groups are displayed in dark blue. Unselected clips are displayed in dark gray.

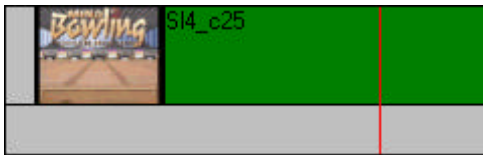
Click on unselected clip selects this clip and unselects other clips in current selection group.

Cursor shape  indicates that **Multiselection mode** is turned on from **Toolbar**, **Edit** menu, or while **Shift** key is pressed). In this mode following actions invert clip selection state (change selected to unselected and vice versa):

- 1) click on clip - invert this clip selection;
- 2) double click on track - invert selection for all clips on track after specified position;
- 3) press left mouse button and drag - invert selection for all clips touched by or within specified box.

It may be up to 9 clip selection groups. It is possible to change the number of current clip selection group in **Selection Settings** dialog or with **Next selection group** command in **Toolbar** or **View** menu.

## 4.5 Video Tracks and Video Clip

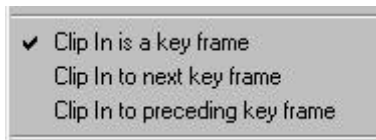


Project may have one or two video tracks. During playback video first video track has priority over second video track. Second video track may be used as temporary storage for video fragments or as the second variant of the video when one track is switched off with **Mute** button.

Application can playback and export video in the **SAME** format only. All clips must have the same width, height, frame rate and CODEC name. Two files with same width, height and frame rate but with different CODECs can be recompressed with **Convert AVI** on *Clip Collection* window **Tools** menu. After starting "AviEdit" application you can open the first file and look up its info. Then you need to open the second file and choose video CODEC parameters the same as for the first file CODEC.

Features that are common for all clips are described in section 4.3 "Clip on a Track". If **Draw first and last frames at clip edges** is checked in *Video Settings* then first and last frame of the clip are displayed.

Right-click calls local menu. See also section 4.3 for general description. Video clip specific commands are described below:



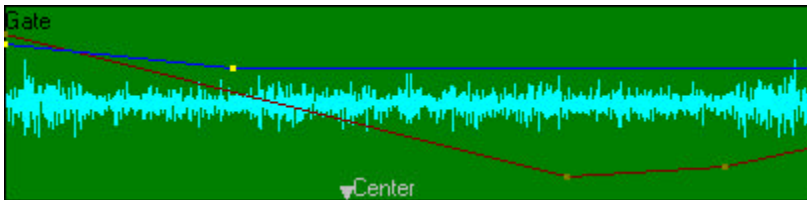
**Clip In is a key frame** indicate that video clip starts from a key frame.

**Clip In to next key frame** move clip In position in source file forward to next key frame.

**Clip In to preceding key frame** move clip In position in source file back to preceding key frame.

In position mentioned above is a clip 'start' in source file. See also **Start from Key frame only** in *Video Settings* for more details on key frame.

## 4.6 Audio Tracks and Audio Clip



Project may have up to 16 audio tracks.

## 4. Project Window Working Area

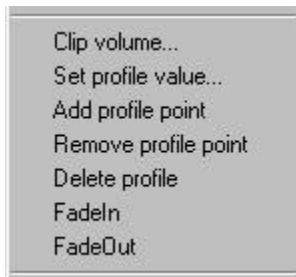
Features that are common for all clips are described in section 4.3 “Clip on a Track”. Audio clip appearance depends on *Clip Selection* state. Sound waveform picture is displayed in light blue color. Volume profile is displayed with blue lines, balance profile - with magenta lines. Profiles key points is drawn in yellow.

**Edit volume profile** or **Edit balance profile** commands in **Edit** menu or *Toolbar* control, which profile is available for editing (active). Inactive profile is drawn in dark color (dark blue/dark magenta and dark yellow).

Besides volume and balance profiles, each audio clip has a general volume and balance, see below **Clip volume** on local menu. Each audio track and whole project also have the master volume and balance levels, see section 6.8.1 “*Audio meter (Faders)* windows”. Volume at each point of clip is a sum (in dB) of volume profile at this point and all master volumes (project master volume, track master volume and clip master volume). The same is true for balance.

**Attention!** Maximum volume amplification is 12 dB (4 times). At points, where maximum amplification is reached, profile touch the top of clip rectangle and stay there while other profile key points may be moved with master volume change. Thus the profile is distorted and mixed signal may not correspond to your expectation. To avoid this watch the clip volume profile - it should not touch top clip edge.

Right-click calls local menu. Common items are described in section 4.3. Items specific for audio clip listed below. Either volume or balance profile can be edited at one time, see **Edit volume profile** and **Edit balance profile** on **Edit** menu.



<b>Clip volume</b>	call dialog named ‘ <i>Clip</i> ’ to view/set master volume and balance for this clip. See also section 4.8 “ <i>Volume</i> and <i>Balance</i> dialogs” for details.
<b>Set profile volume</b>	call dialog named ‘ <i>Profile</i> ’ to set volume or balance profile value at specified position. See also section 4.8 for dialog details. Profile value may be changed for profile key point or horizontal segment of profile. On slanted segment of profile application at first calls dialog to confirm insertion of new key point at specified position.
<b>Add profile point</b>	add new key point to profile at specified position.
<b>Remove profile point</b>	remove key point at specified position.
<b>Delete profile</b>	remove key points and set default profile - constant volume/balance level.
<b>FadeIn</b>	apply (multiply) <i>FadeIn</i> profile to current volume profile from start of clip to specified position. See section 6.7.1 “ <i>Fade profile</i> dialog” for more details.

## 4. Project Window Working Area

**FadeOut**

apply (multiply) *FadeOut* profile to current volume profile from specified position to end of clip. See section 6.7.1 for details.

### 4.7 MIDI Track and MIDI Clip



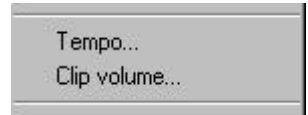
Audio clip appearance depends on *Clip Selection* state. At clip bottom midi measures are displayed.

At position, where source file has tempo or time signature change command, the measure, current tempo and source tempo are displayed: '4/4,120[120]'.

Right-click calls local menu. Common items described in section 4.3. Items specific for audio clip:

**Tempo** call *Tempo* dialog to modify clip tempo, see below.

**Clip volume** call dialog named '*Clip*' to view/set master volume for this clip. See also section 4.8 "*Volume and Balance* dialogs" for details.



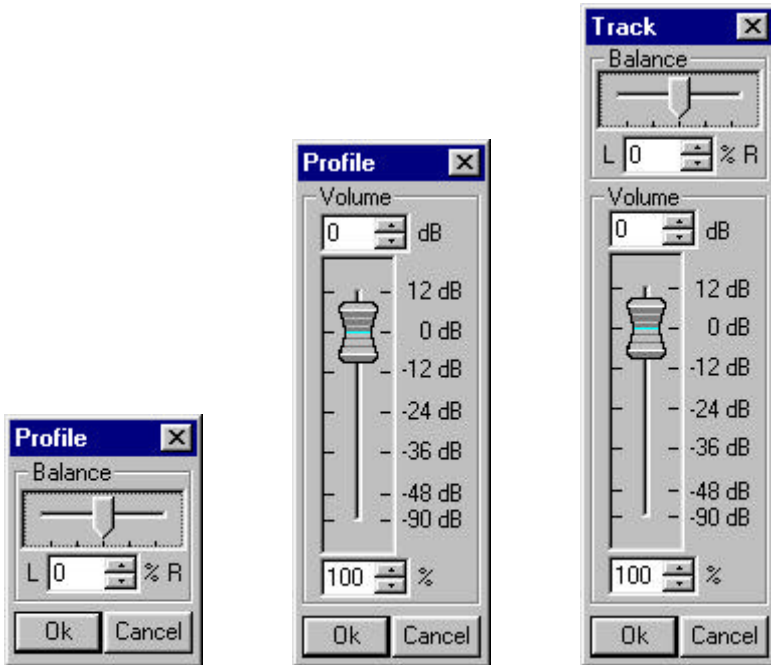
#### 4.7.1 *Tempo* dialog

The number at bottom of the window shows original source file tempo at specified position. The top number sets new tempo. The tempo of whole clip will be changed in proportion new tempo (at top) to original tempo (at bottom).



## 4. Project Window Working Area

### 4.8 Volume and Balance dialogs



Volume and/or balance dialogs may be called from various menus. Depending on context, dialog may have either “Volume” or “Balance” group, or both groups. Dialog has ‘*Profile*’ and ‘*Clip*’ labels when called with **Set profile value** and **Clip volume** on Audio clip local menu. Label ‘*Track*’ has dialog when called with **Track Volume** on *Track State* window local menu. Note that master volume and balance for **project** and Audio tracks can be set in *AudioMeter (Faders)* window, see section 6.8.1.

Balance value can be set from –100 (Left) to 100 (Right).


Nominal volume value is 0 dB or 100 %. Please see notes on maximum amplification value in section 4.6 “Audio Tracks and Audio Clip”.



## 5 Project Window components

### 5.1 Project Overview window



All tracks and clips of the project are schematically presented in this window. The bold black frame determines position of *Working Area* - part of project, which is displayed in window with video/midi/audio tracks. Red line – current time position.

To shift the *Working Area* - move cursor inside frame (cursor shape became  ) - press left mouse button and drag frame.

To change *Working Area* size move left or right edge of working area - place cursor over black frame edge (cursor became  or  ) press left mouse button and drag edge.

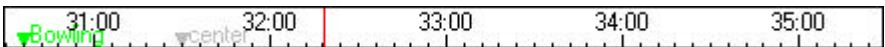
To completely redefine *Working Area* - press **right** mouse button at position of one new edge, drag and release button where you want to set another new edge.

In *Set Size* dialog values for left and right *Working Area* edges can be set.

Project duration and number of audio tracks in project can be changed in *Set Size* dialog and *General Settings* dialog.

Double click starts playback from pointed position to the end of project.



### 5.2 Time Ruler



Time Ruler provides a project time reference for *Working Area*. Each click in this window redefines current time position, represented by vertical red line. ‘Scrubbing’ starts if you press left mouse button, hold it and then move mouse. Double click starts playback from specified position to the end of working area.

Playback and scrubbing features and setting described in section on *General Settings*, note that **Show video**, **Play Audio** and **Auto-scroll rolls** switches correspond to items with same names in local menu.

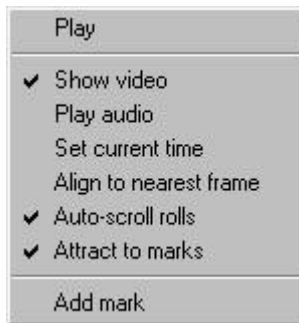
Format of time label may be set in *View* menu, distance between labels chosen in *Scale Step* list window.

*Place marks* (triangles with optional name) are described in section 5.3. Cursor change shape to  Mark near active place mark ().

## 5. Project Window components

Right-click calls local menu. Note that **Add Mark** item may be dynamically replaced.


<b>Play</b>	playback project from specified position to the end of working area.
<b>Show video</b>	enable drawing of current frame on videoplayer ( <i>Video</i> window). Identical to <b>Show video</b> in <i>General Settings</i> and <b>Show In/Out frame</b> in <i>Edit Clip</i> dialog.
<b>Play audio</b>	enable audio scrubbing with left mouse button dragging.
<b>Set current time</b>	call <i>Set Current Time</i> dialog, see ‘ <i>Current Time</i> ’ window section.
<b>Align to nearest frame</b>	enable aligning of current time to nearest frame position. Same as switch in <i>Alignment Settings</i> .
<b>Auto-scroll rolls</b>	control automatic scrolling of working area when mouse moves outside the time ruler, see <i>General Settings</i> .
<b>Attract to marks</b>	enable interaction of current time position with place marks.
<b>Add mark</b>	set place mark at specified position, item may be dynamically replaced, see ‘ <i>Place Marks</i> ’ section.



### 5.3 Place marks


Place marks help on with alignment and synchronization of clips. Place mark works during moving of selected clip(s). It attracts objects and keeps them while object is within predefined distance from place mark. Object type, distance and other alignment parameters are defined in *Alignment Settings*.

Place mark can be set in *Time Ruler* or in clip on a track. Time ruler place mark has fixed ‘absolute’ project time. Place mark in a clip have fixed ‘source file’ time, it always moves with the clip, clip resize operations have no effect on it.

When cursor approaches mark it change shape to  and mark may be dragged with left mouse button. When you drag mark in *Time Ruler* you change current time position also.

*Time Ruler* or clip local menus have place marks related commands:

**Add mark** set place mark at specified position.

Following items replace **Add mark** if local menu called with  cursor:

**Set mark position** call dialog to set mark position.

**Mark name** allow to set mark name.

**Remove mark** remove place mark.



## 5. Project Window components

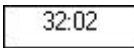
Place marks may be arranged in groups (up to 9 groups), only one group may be active. **Next mark group** in *Toolbar* or *View* menu change active group in cycle.

Active group number may be set in **Alignment Settings** dialog.

Place mark of active group is displayed as solid green triangle. Place mark of inactive group - as solid gray triangle.

**How it works.** Place mark attracts current time position (if this is not switched off in **Alignment Settings**). Suppose that place mark is set in *Time Ruler*. When you drag current time position and distance between it and place mark becomes less then predefined, the current time position will jump to place mark position. While distance between cursor and place mark is less then predefined distance then current time will be kept at place mark. In similar ways alignment works with various points in dragged clips. In **Alignment Settings** dialog you can select what interacts with place marks: other place marks, edges of clips or mouse position.

### 5.4 Current Time window



This window to the left of *Time Ruler* displays current time in format that may be set in *View* menu. Double click in window calls *Set Current Time* dialog.



In *Project* window two vertical red lines visually represent current time, first in *Project Overview* window, second cross *Time Ruler*, *Range* window and tracks in *Working Area*. Current time line may be dragged with mouse in *Time Ruler* and *Working Area*.

### 5.5 Range Window



Range is a user defined time interval used in various operations. Window has same time scale as *Time Ruler*. Selected interval is displayed in blue. If range is specified then *Range Flag* window displays blue band, and *Playback Start and Playback Duration* windows display range start time and duration in blue.

To specify range press left mouse button, drag and release. During mouse moving the program displays current frame from video track, if **Show video** is on (see *Time Ruler* local menu or **General** tab of *Settings* dialog). Shift-click reset nearest bound to specified position. Double click set range, that cover all clips in project except ones on switched off tracks; **Include all clips** on *Range* menu does the same.

To set/view range bounds in current time format double click in *Range Flag* window or click on **Set Size** button to call *Set Size* dialog.

## 5. Project Window components

Right-click calls local menu that has same items as Range menu and two additional items:

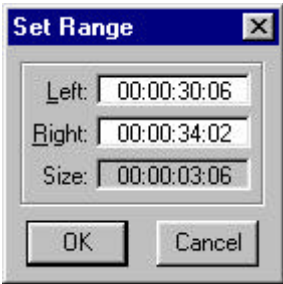
- Normalize audio... call *Normalize Level* dialog where request maximum output audio level then adjust project master volume to normalize audio.
- Check overflow mix audio within range and represent resulting audio volume as color picture in range window in accordance with volume levels and color associations in *Audio Meter Settings*.



### 5.6 Range Flag window



If this window to the left of *Range Window* has dark blue band it indicates that range is defined otherwise it is blank. Double click in window calls *Set Range* dialog.



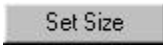
### 5.7 Playback Start and Playback Duration



These two windows show playback start time and playback duration. If range is specified in *Range Window* then range start and duration are shown in blue. Otherwise windows show *Working Area* start and size in black. Where playback actually starts depends also on *Start playback from current time position* switch in *General Settings* dialog.

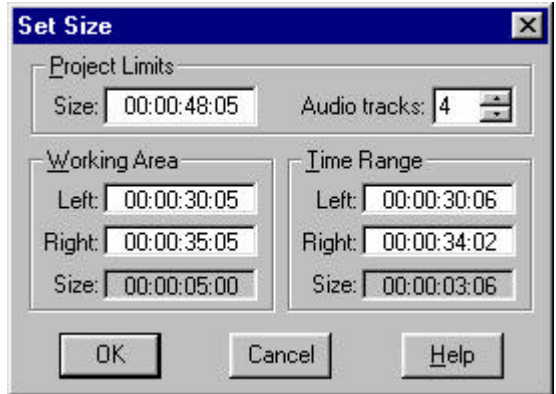
Double click in either window calls *Set Size* dialog, see section 5.8.

### 5.8 Set Size



Set Size button or double click in either *Playback Start* or *Playback Duration* windows (see section 4.4) calls *Set Size* dialog with three groups.

“Project Limits” group is identical to and provides same settings as group with same name in *General Settings* dialog. With Size and Audio tracks project duration and number of audio tracks in project may be changed.



In “Working Area” group left and right bounds of *Working Area* can be changed.

“Time Range” group provides same settings as *Set Range* dialog. Left and right range bounds can be changed.

### 5.9 Scale Step



Interval between ticks with time labels in *Time Ruler* window may be selected from list. This setting effectively zooms *Working Area* to size, which is natural for selected scale.

If vertical red line that represents *Current Time* position is within *Working Area* then ‘zoom’ preserve visual position of this line; otherwise center of *Working Area* is preserved.

### 5.10 Zoom buttons

Four zoom buttons are located in low left corner of *Project* window. **Zoom In (+)**, **Zoom Out (-)**, **Zoom to Project (I)** are also available on *View* menu; **Zoom in range (\*)** on *Range* menu.

**I** - set *Working Area* which cover whole project. Same as **Zoom to project (I)** on *View* menu.

**\*** - set *Working Area* with current time *Range* bounds. Same as **Zoom in range (\*)** on *Range* menu

**+** - expand *Working Area* at right. Same as **Zoom In (+)** on *View* menu.

**-** - shrink *Working Area* at right. Same as **Zoom Out (-)** on *View* menu.

# 6 Project Window Menu

This chapter describes *Project* window global menu and submenus.

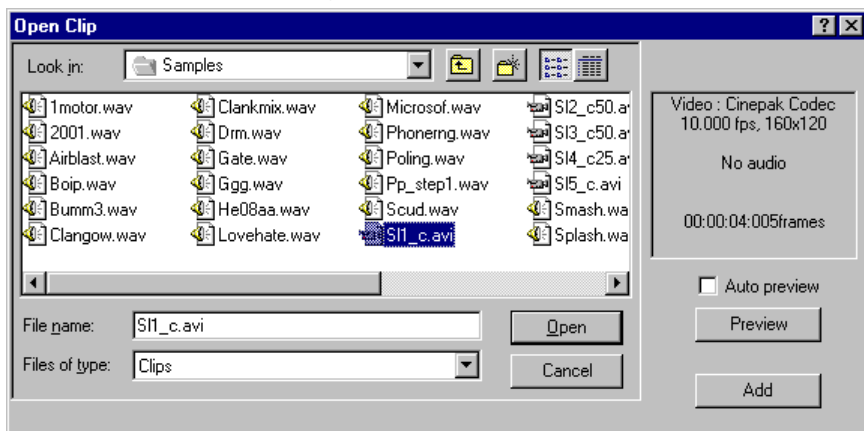
## 6.1 File menu

Project files have file name extension TML. Clip collection files have file name extension PRC. Each project has associated clip collection file. Clip collection file may be associated with multiple project files. **Save project** and **Open project** saves and opens both files correspondingly.

<b>New project</b>	create new (empty) project.
<b>Open project</b>	open project and associated clip collection.
<b>Add source File</b>	call <i>Open Clip</i> dialog to select source file, then add clip with reference to whole source file content.
<b>Save project</b>	save changes in project and clip collection files.
<b>Save project As</b>	save project into specified project file. For new <i>Clip Collection</i> clip collection file name also requested.
<b>Save All</b>	copy project and clip collection and all source files into one directory.
<b>Export</b>	
<b>AVI</b>	write resulting video and audio data into specified AVI-file.
<b>Wave</b>	write resulting audio data into specified WAVE-file.
<b>Aiff</b>	write resulting audio data into specified AIFF-file.
<b>Exit</b>	exit from application.

Most recently used projects list may be inserted before **Exit** item.

### 6.1.1 Open Clip dialog



When called from *Project* window File menu add clip with reference to whole file content to project and *Clip Collection*. In section 9.1 “Operations summary”

described how to insert clip in *Project window*. **Add source file** on *Clip Collection Window* File menu command adds clip only to *Clip Collection*.



Info area at right displays information about selected source file.

Preview button starts playback of selected file.

Auto preview enables automatic playback start when selection is changed.

Add button appears only if dialog is called from *Clip Collection* window, it adds clip with selected source file to *Clip Collection* and does not close dialog.

### 6.2 Edit menu

Undo	cancel last operation, if possible.
Redo	repeat last canceled operation, if possible.
Delete	remove selected clip(s).
Cut	move selected clip(s) to <i>Clipboard</i> , see section 3.5.
Copy	copy selected clip(s) to <i>Clipboard</i> .
Copy from file	copy all clips from specified project file to <i>Clipboard</i> .
Paste	add all clips from <i>Clipboard</i> to project at current time position on free tracks.
Insert	split all clips at current time position, shift them to right and insert clips from <i>Clipboard</i> in this gap. If there is video data then current time and gap width aligns to frame boundaries.
Split	split selected clip(s) in two parts at current time. If there is video data then current time aligns to frame boundaries. New clips preserve <i>Clip Selection</i> state of original and have their own copy of volume and balance profiles.
Cross fade	for two selected overlapped audio clips apply <i>FadeOut</i> to left clip and <i>FadeIn</i> to right clip in overlapped region.
Edit volume profile	enable editing of volume profile of audio clips.
Edit balance profile	enable editing of balance profile of audio clips (for stereo projects).
Add profile point mode	cursor shape  indicates that mode is selected with button on <i>Toolbar</i> , on <i>Edit</i> menu or when Control key is pressed. Each click in audio clip rectangle adds new point to volume/balance profile at specified position.
Multiselection mode	cursor shape  indicates that mode is selected with button on <i>Toolbar</i> , on <i>Edit</i> menu or when Shift key is pressed. Each click selects/deselects clip. See <i>Clip Selection</i> section for more details.
Select All	select all clips (reset other selection groups).
Deselect All	deselect all clips (reset other selection groups).
Invert selection	select all unselected clips and deselect selected clips in current group.

## 6. Project Window Menu

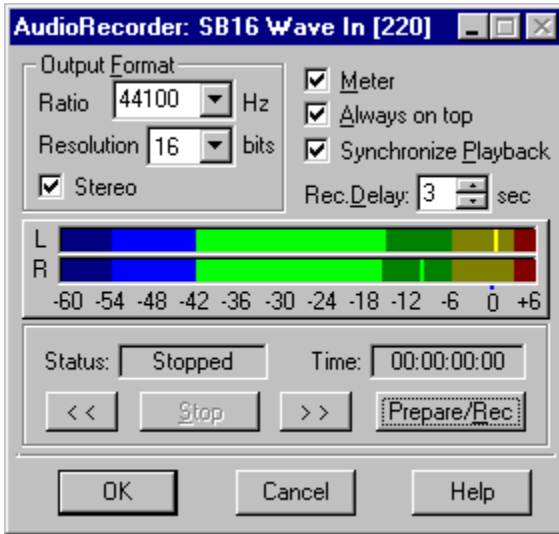
### 6.3 View menu

Next mark Group	change current <b>Mark group number</b> in cycle.
Next selection group	change current <b>Clip selection group number</b> in cycle.
Show Video tracks	enable displaying of video tracks.
Show Midi track	enable displaying of midi track.
Show Audio tracks	enable displaying of audio tracks.
Show audio meter(faders)	shows <i>Audio meter (Faders)</i> window. Same as <b>Audio meter (Faders)</b> on <b>Window</b> menu
Audio tracks height	
Double	set double height for all audio tracks.
Normal	set normal height for all audio tracks.
Half	set half height for all audio tracks.
Time in Frames	display time labels as frame counter.
Time in SMPTE	display time labels in SMPTE format.
Time in milliseconds	display time labels in milliseconds.
Zoom In	expand <i>Working Area</i> at right.
Zoom Out	shrink <i>Working Area</i> at right.
Zoom to project	set <i>Working Area</i> which cover whole project. See also section 5.10 “Zoom buttons”.

### 6.4 Command menu

Play	start playback of current project.
Stop	stop playback.
Record audio	request target file name (press <b>Save</b> button to continue when you define file name) and call <i>Audio Recorder</i> dialog, see below.
Next frame	set current time position to next frame.
Previous frame	set current time position to previous frame.
Rewind	set current time position to <i>Playback start</i> .
Master volume	set project master <i>Volume and Balance</i> If the <i>Audio meter</i> window was opened, the application activates it and sets focus to master volume fader.
Normalize audio	call <i>Normalize Level</i> dialog (see below), where request maximum output audio level, then adjust project master volume to normalize audio.
Check overflow	mix audio in selected range and show resulting audio volume as color picture in <i>Range window</i> . The picture reflects volume according to color thresholds in <i>Audio meter Settings</i> .

## 6.4.1 Audio Recorder dialog



**Ratio, Resolution, Stereo** select recording audio parameters.

**Meter** controls displaying of input audio volume. For details see section 6.8.1 “Audio meter (Faders) windows”.

**Always on top** keeps recorder window on top.

**Synchronize playback** turns on playback of current project during recording. Play command will be issued with **Record** button press.

**Rec.Delay** sets time between click on **Record** button and start of recording.

**Status** shows current state of recorder: Stopped, Recording or Pause.

**Time** shows time position in recording file.

**<< or >>** buttons rewind to begin or forward to end of recording file. The end of recording file is the end of last recording fragment.

**Prepare/Rec** button makes preparations for recording process. After that label changes to **Record**.

**Record** button starts recording.

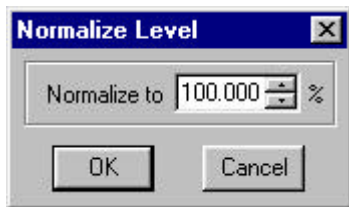
**Stop** button stops recording. To record next fragment press **Prepare / Rec** button.

**OK** button closes dialog and inserts the written file in project and clip collection.

**Cancel** button closes dialog and deletes written file.

## 6. Project Window Menu

### 6.4.2 Normalize Level dialog



This dialog can be called with **Normalize audio** on **Edit** menu or on *Range* window local menu. It requests maximum output audio level and adjusts project master volume.

The program mixes selected range and finds maximum volume. Project master volume is adjusted to a value at which resulting maximum volume will be equal to specified level.

This command does not change volume/balance profile, clip or track master volume. It changes only the project master volume.

**Attention!** Maximum volume amplification is 12 dB (4 times). Thus, the program can not normalize file with maximum level less than 25%. Second, if resulting amplification for clip sample exceeds 12 dB then mixed signal may not correspond to your expectation. To avoid this watch the clip volume profile - it should not touch top clip edge.

## 6.5 Range menu

Range is a user defined time interval used in various operations It is displayed and may be redefined in *Range Window*.

Commands operate on clips within range and on part of clips within range if range bound crosses clip.

<b>Zoom in range</b>	zoom working area to selected range bounds.
<b>Include all clips</b>	range will cover all clips except clips on switched off tracks
<b>Copy...</b>	
all tracks	copy clips from all tracks to <i>Clipboard</i> .
active tracks	copy clips from active tracks to <i>Clipboard</i> .
<b>Cut...</b>	
all tracks	cut clips from all tracks to <i>Clipboard</i> and shift to left all clips at right.
active tracks	cut clips from <i>Active</i> tracks to <i>Clipboard</i> and shift to left clips on <i>Active</i> tracks at right.
<b>Clear...</b>	
all tracks	remove clips from all tracks.
active tracks	remove clips from <i>Active</i> tracks.
<b>FadeIn...</b>	
all tracks	apply <i>FadeIn</i> profile to clips on all tracks.

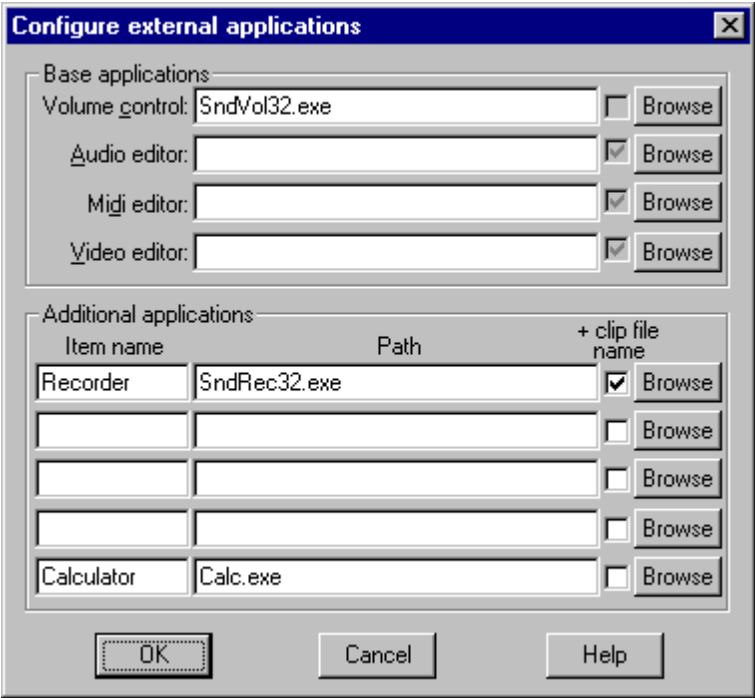


active tracks	apply <i>FadeIn</i> profile to clips on <i>Active</i> tracks.
selected clips	apply <i>FadeIn</i> profile within range only to <i>Selected clips</i> .
FadeOut...	
all tracks	apply <i>FadeOut</i> profile to clips on all tracks.
active tracks	apply <i>FadeOut</i> profile to clips on <i>active</i> tracks.
selected clips	apply <i>FadeOut</i> profile within range only to <i>Selected clips</i> .

6.6 Tools menu

Each menu item launches corresponding application defined in *Configure external applications* dialog.

Volume control	start 'volume control'.
Audio editor	start 'audio editor'.
Midi editor	start 'midi editor'.
Video editor	start 'video editor'.
ToolName1	actual item name set in <i>Configure external applications</i> dialog and start corresponding tool. In accordance with dialog that is shown below it should be Recorder.
	...
ToolName5	...
Configure...	call <i>Configure external applications</i> dialog to set what applications correspond to items on Tools menu.



## 6. Project Window Menu

Path contains path to external application.

'+ Clip filename' control whether to add clip source file name to application command line.

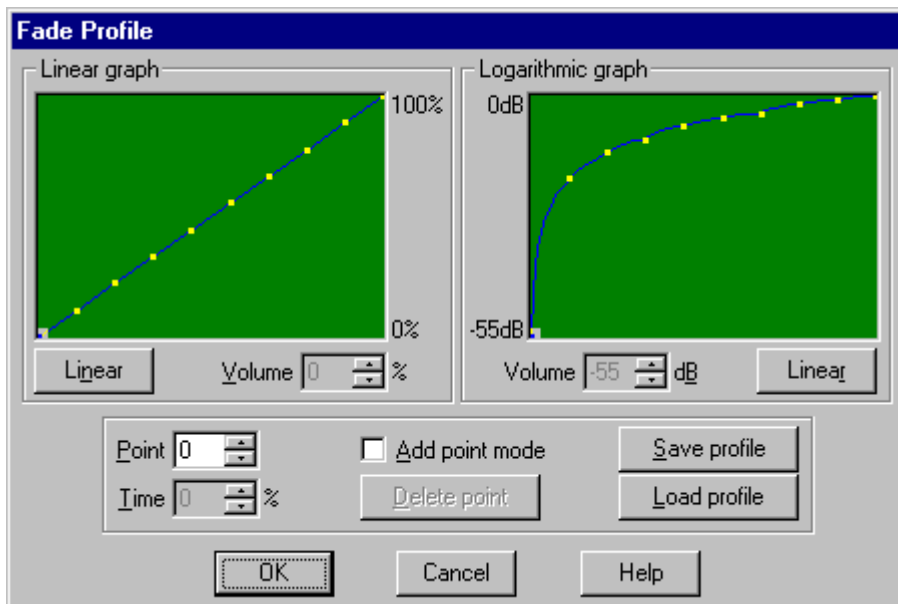
Browse button allows to select application.

### 6.7 Options menu

Settings...	call project <i>Settings</i> dialog described in chapter 7.
Fade profile	call <i>Fade Profile</i> dialog, see below.
Font for Time mark	choose font for displaying time code label.
Font for clip Name	choose font for displaying clip name.
Clip name color	choose color for displaying clip name.
Save Options	safety program settings save. Application automatically save current program settings on exit. These settings will be used at program start. If application was terminated abnormally then program setting will not be saved and last saved options are used.

#### 6.7.1 Fade profile dialog

FadeIn and FadeOut commands on Audio clip local menu apply (multiply) fade profile to current volume profile. Fade profile scales from start of clip to specified position and from specified position to the end of clip correspondingly. CrossFade on Edit menu is equivalent to FadeOut in first clip and FadeIn in second.



*Fade profile* dialog specifies FadeIn profile. FadeOut profile is time reversed FadeIn profile. Note that except scaling profile is a global setting for all clips.

## 6. Project Window Menu

The dialog shows fade profile in linear and logarithm scales. Between adjacent points profile has linear interpolation (in logarithmic scale it looks like a bend). When cursor approaches key point it change shape to **+**. Click selects key point, selected key point surrounded by pink square. To move point - press left mouse button and drag. Key point can not be placed before and below previous point and after and above next. First and last points can not be moved.

Linear buttons set points equidistantly in corresponding scale.

Volume allows to set volume of selected point in corresponding scale.

Point allows to change selection to point with specified number.

Time allows to set time of selected point.

Add point mode allows to add key points to profile. Each click in profile window adds new key point.

Delete point deletes selected point from profile.

Save profile saves current profile into file (\*.FPR).

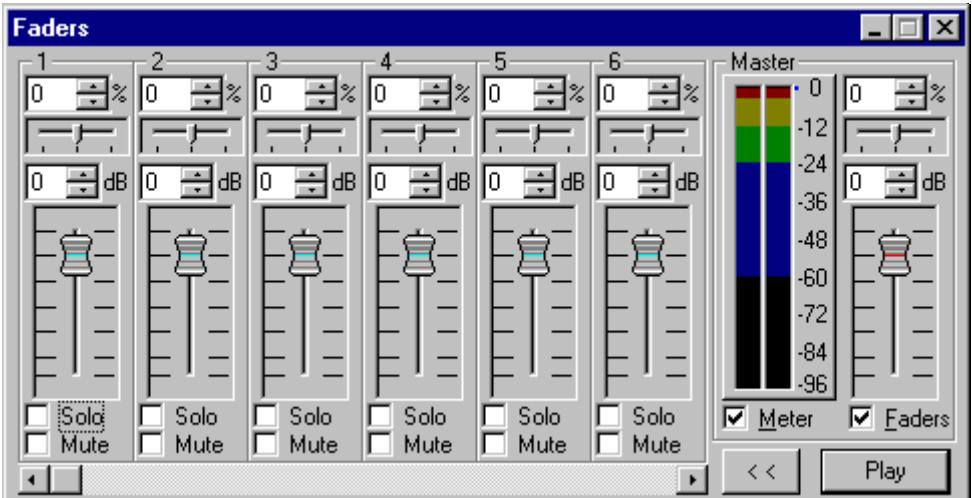
Load profile loads profile from file.

### 6.8 Window menu

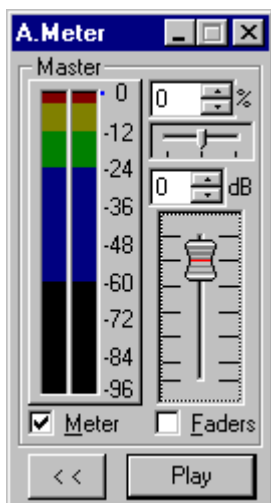
- |                      |  |
|----------------------|--|
| Clip Collection      | show <i>Clip Collection</i> window.      |
| Audio meter (faders) | show <i>Audio meter (Faders)</i> window. |
| Video                | show video preview window if possible.   |

#### 6.8.1 Audio meter (Faders) windows

Audio meter (Faders) on Window menu activates window that can be shown as *Faders* or *A.Meter*, depending on Faders switch state, see below:



## 6. Project Window Menu



Window contains output volume indicator that displays current volume during playback audio.

Indicator is divided into 5 intervals. Output audio volume within each interval is painted in Dark Blue, Blue, Green, Yellow and Red color consequently. Thin lines mark maximum peak volume (if *Peak hold* is enabled in *Audio meter Settings*). These marks are removed at playback start. Mouse click in indicator also removes them. Color intervals delimiting values, displayed volume level range and reference text labels presentation can be changed in *Audio meter Settings*.

Project master volume can be set with vertical fader or by editing volume value in text box above it. Horizontal fader and corresponding text box controls project master balance.

**Meter** when checked enables monitoring of output audio volume on indicator.

**Faders** control presence of faders at left. When unchecked dialog contains only elements described above, and is named *A.Meter*. When checked dialog name is *Faders* and dialog has track faders with **Solo / Mute** buttons.

*Faders* dialog shows 6 tracks faders. Track numbers are displayed at top. If current project has less then 6 tracks then excessive faders will be grayed. If project has more then 6 tracks scrollbar at bottom allows to select which 6 tracks will be displayed.

You can dynamically change project and track volume and balance during playback.

Attention! Changes will always have predefined delay. This delay depends on value of **Buffer size** in *Audio Settings*.

### 6.9 Help menu

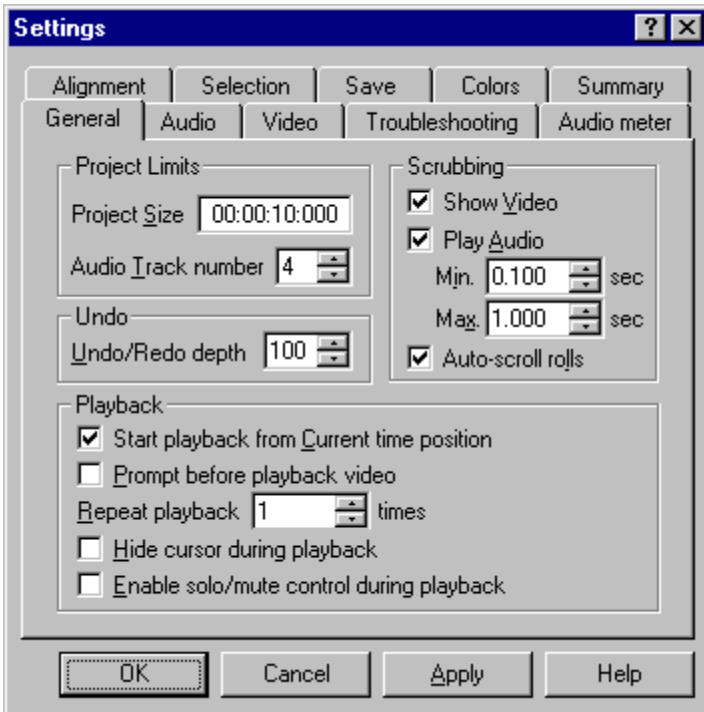
Project window description	show <i>Project</i> window description.
Clip Collection window description	show <i>Clip collection</i> window description.
Overview	show general application overview.
Contents	show contents of the help.
Using help	show help topic about using help in Windows.
About	show dialog with information about application and it's authors. Click on <i>Register now</i> button start registration process; see chapter 2 for details.

## 7 Settings

Settings on Toolbar or Options menu call dialog with following panels:

General	general project parameters.
Audio	audio/midi parameters.
Video	video parameters.
Troubleshooting	troubleshooting options.
Audio meter	volume indicator parameters.
Alignment	alignment and <i>Place Marks</i> .
Selection	selection parameters.
Save	saving and autosaving parameters.
Colors	customize color settings.
Summary	information fields embedded in exported files.

### 7.1 General



“Project Limits” group.

Project size sets duration of the whole project.

Audio track number sets number of available audio tracks.

“Undo” group.

## 7. Settings

**Undo/Redo depth** sets the number of Undo/Redo operations.

“**Scrubbing**” group parameters allows to control application behavior when changing current time in *Time Ruler*.

**Show video** enables drawing of current frame on videoplayer.

**Play audio** enables audio scrubbing with left mouse button dragging.

Sound playbacks in small pieces of **Min.** duration. If during the small piece playback current time is changed then next piece starts from new current time position. While current time do not changes audio plays piece by piece up to **Max** duration; at **Max.** duration it loopbacks from current position. In other words, **Min** value sets the minimal duration of playing; if mouse is stopped when next piece playing is started, duration will be **Max**.

**Auto-scroll rolls** changes scrolling mode of working area. When current time mark is dragged outside Time Ruler the working area automatically shifts. If auto-scroll rolls switch is turned on then working area slides smoothly while left mouse button is pressed outside Time Ruler. Else when current time mark reach the working area edge the working area shifts at a step. It looks like at in this moment time mark and associated cursor jumps back from the shifted edge.

“**Playback**” group.

**Start playback from current time position** turns on ‘VTR playback’ mode. In this mode command ‘Play’ starts playback from current time position. ‘Stop’ do not changes current time position. When this switch is turned off the *Playback Start* and *Playback Duration* windows define playback start position. ‘Stop’ restores current time position to one before playback.

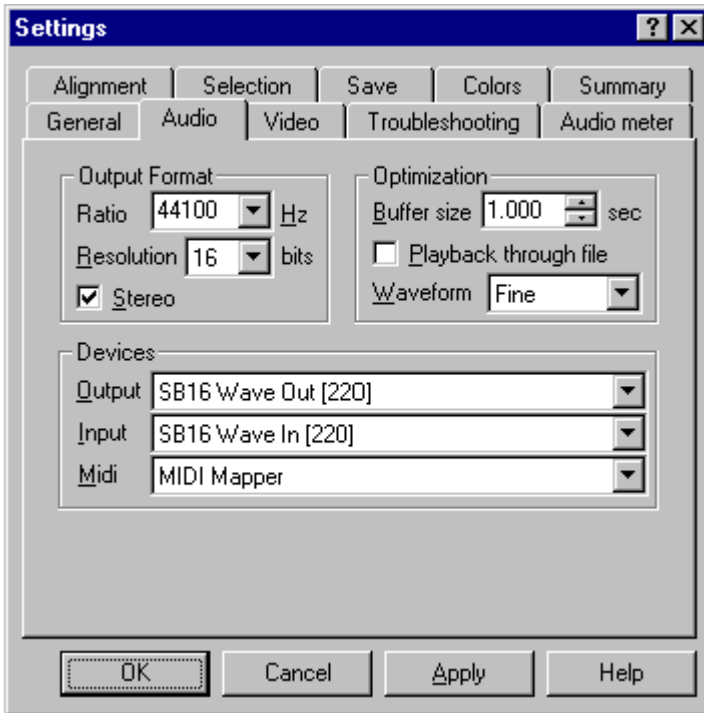
**Prompt before playback video** control whether first frame of video will be displayed and confirmation will be asked.

**Repeat playback** sets playback repeats count for command ‘Play’.

**Hide cursor during playback** – if checked current time mark will not be drawn over project tracks. Current time line will be drawn in *Time Ruler* window only. This option reduces system load during playback.

**Enable solo/mute control during playback** allows dynamically include/exclude audio tracks from mixing during playback.

## 7.2 Audio



“Output Format” group.

**Ratio** defines audio sampling ratio for the current project. First opened audio file determines a project ratio. Predefined standard ratio may be selected from the list; arbitrary ratio values can be set in professional version. If you change the project ratio then all clips with audio will be removed from project. *Change sound parameters* dialog request confirmation to clear audio tracks.

**Resolution** selects number of bits per sample for current project.

**Stereo** turns on stereo mode for current project.

“Optimization” group allows to tune parameters to power of your PC.

**Buffer size** sets premix buffer size. In particular, premix buffer size determines delay when track volume is dynamically changing during playback.

**Playback through file** turns off real time audio mixing. In this mode audio tracks will be preliminary mixed in temporary file before playback. Application utilizes optimized preliminary mixing algorithm. Only changed part of the project will be remixed on next play.

**Waveform** control a quality of waveform pictures, which are displayed on audio clips. Better picture takes more resources and may slow down application for complex projects on some computers. Try decrease or turn off picture.

“Devices” group lists allow to select devices:

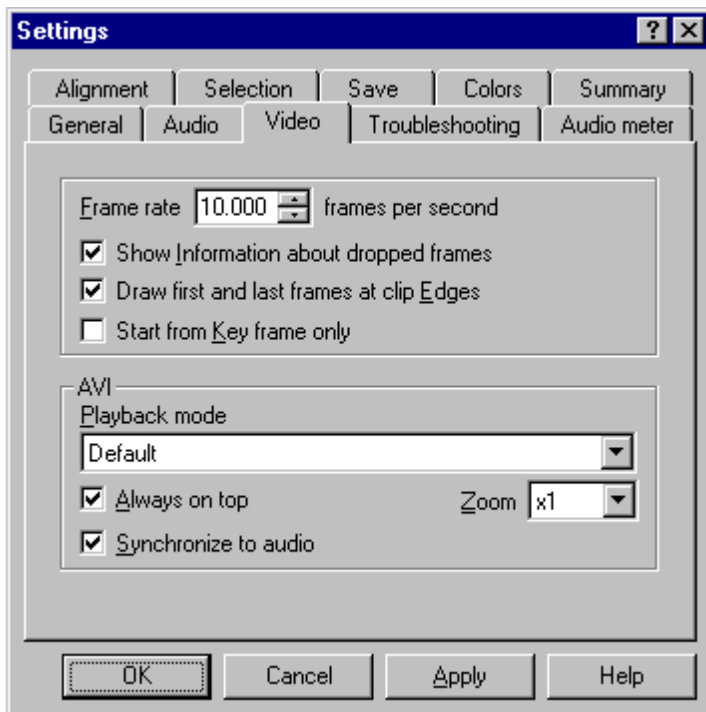
## 7. Settings

**Output** - for playback audio (WAVE format).

**Input** - for recording audio (WAVE format).

**Midi** - for playback music (MIDI format).

### 7.3 Video



**Frame rate** sets project video frame rate. First video clip that added to project with empty video tracks redefines this value.

**Show information about dropped frames.** During playback some video frames may be dropped. When this box is checked dropped frame information will be displayed in dialog window after playback.

**Draw first and last frames at clip edges** turn on drawing of first and last frames at left and right edges of each video clip.

**Start from Key frame only.** Video in AVI-files may have not only key frames. If video clip starts not from key frame then during playback first frames of this clip (up to next key frame) may be drawn with a noise in Video window. Those frames will be drawn with red border. When this switch is checked application prevents from setting of clip left edge (time In) at not key frame. In any case exported AVI-file will have correct video data.

“AVI” group.



Playback mode list selects mode of decompressing and drawing video data. Video codec may not support some of playback modes.

**Full screen** - video codec decompresses and draws frames on external monitor or full screen.

**Decompress directly to window** - video codec decompresses and draws frames directly in Video window.

**Decompress and then draw** - video codec only decompresses frames and application draws them on videoplayer (*Video* window).

**None** - application will not playback video.

**Default** - application tries to find playback mode for codec starting from **Full screen** mode.

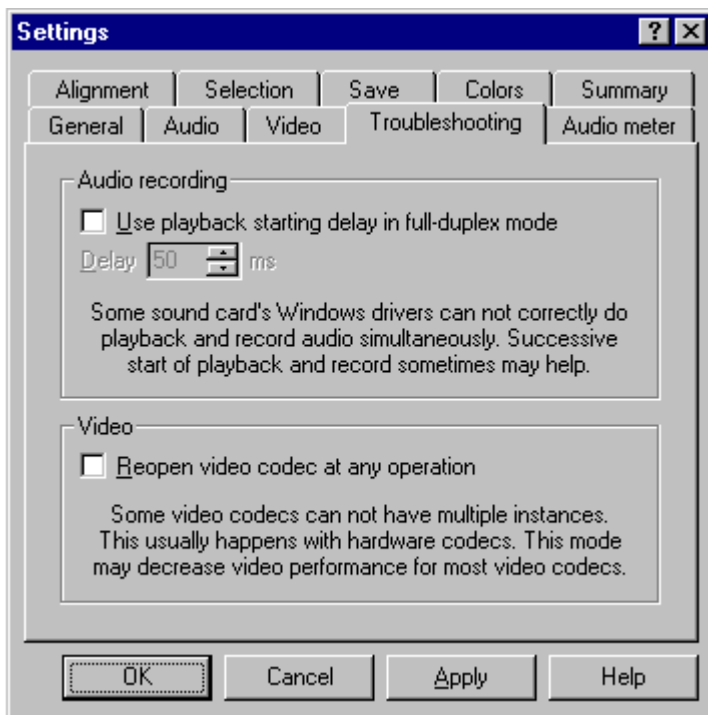
**Always on top** keeps Video window always on top.

**Synchronize to audio** turns on synchronization of video playback to audio playback.

In this mode at audio playback delay a next video frame will have same delay.

**Zoom** list selects scale factor for Video window.

## 7.4 Troubleshooting



Some sound card's Windows drivers can not correctly do playback and record audio simultaneously. Successive start of playback and record sometimes may help.

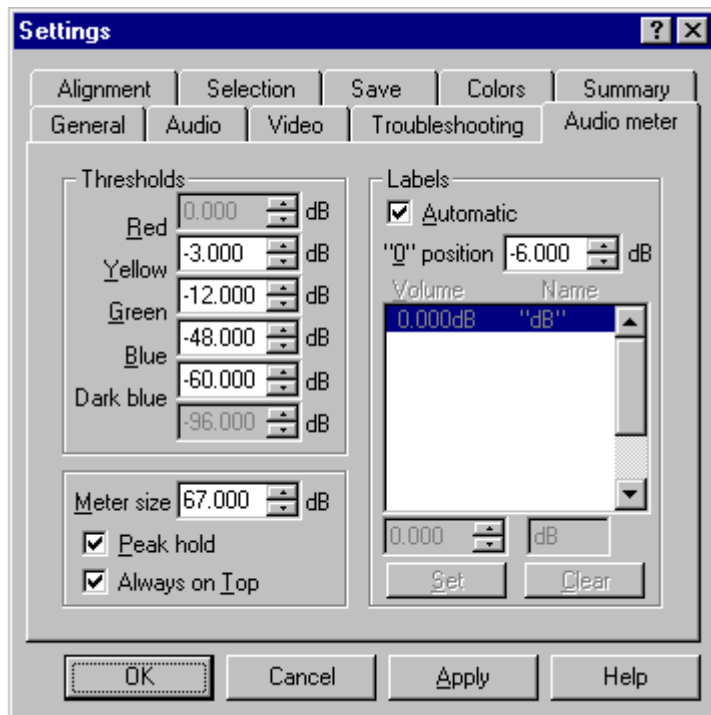
## 7. Settings

Use **playback starting delay in full-duplex mode** turns on this mode.

Delay sets delay duration in milliseconds.

**Reopen video codec at any operation.** In this mode video codec is reopened at each access. This allows to work correctly with hardware video codecs such as one for miroVideo DC20. **Attention!** This mode may decrease video performance for most video codecs.

### 7.5 Audio meter



Audio volume indicator is used in *Audio Recorder* and *A.Meter(Faders)* dialogs. See section 6.8.1 "Audio meter (Faders) windows" for detailed description of indicator. **Check overflow** on *Range Window* local menu also utilizes associations between volume level and its color representation.

"**Thresholds**" group sets correspondence between audio volume level and color on indicator. Delimiting values may descend from 0 dB to -96 dB. Intervals can not overlap.

**Meter Size** defines an audio volume range presented on indicator. Top value is always 'absolute' digital 0 dB.

**Peak hold** enables display of peak mark (thin color band).

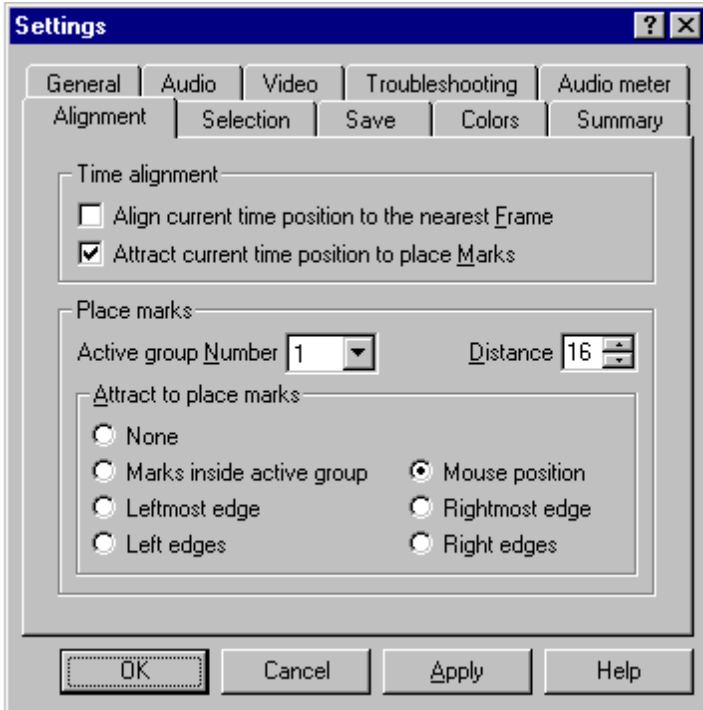
**Always on top** keeps audio meter/faders window always on top.

“Labels” group control appearance of text labels.

Automatic display value in dB as label text and set reasonable distance between labels. Otherwise, up to 10 pairs Volume – Name can be defined.

“0” position defines position of label “0” for automatic text labels. Note, that zero shift or ‘0.000’ value is used by default.

## 7.6 Alignment



“Time alignment” group.

Align current time position to the nearest frame turns on alignment of current time position and left edge of moving clips to the nearest video frame.

Attract current time position to place marks enables interaction of current time position with *Place marks*.

“Place marks” group

Active group number selects group of *Place marks* which will be active. Other groups became inactive.

Distance defines radius (in pixels) around place mark at which objects are automatically caught.

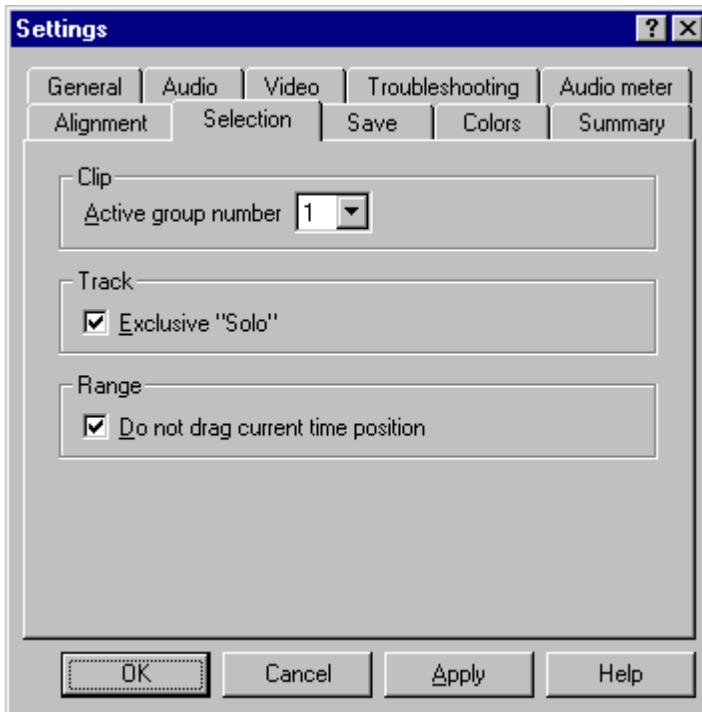
“Attract to place marks” group defines which objects will be caught by place marks during moving of selected clip(s):

None - nothing,

## 7. Settings

**Marks inside active group** - active group marks interacts with each other only,  
**Mouse position** - cursor position aligns to marks of active group. When cursor remains within catching range, selected clip(s) are not moved.  
**Leftmost edge** - leftmost edge of selected clips aligns to marks of active group,  
**Rightmost edge** - rightmost edge of selected clips aligns to marks of active group,  
**Left edges** - left edge of each selected clip aligns to marks of active group,  
**Right edges** - right edges of each selected clip aligns to marks of active group,

### 7.7 Selection

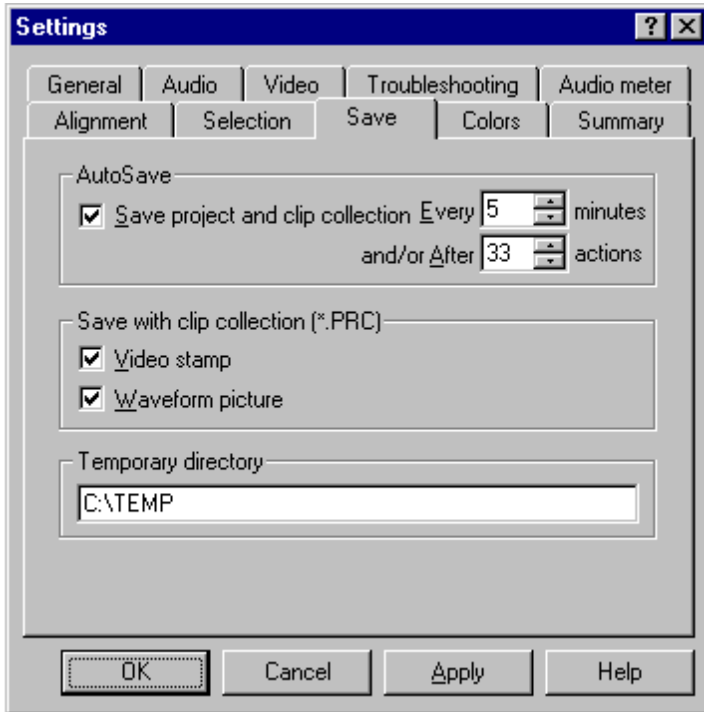


**Active group number** sets active Clip selection group number. Other groups became inactive.

**Exclusive "Solo"**. In this mode, if track is marked as "solo" then **only this** track will be included in playback.

**Do not drag current time position**. If is not set current time position line is dragged, when time range is defining in *Range Window*.

## 7.8 Save



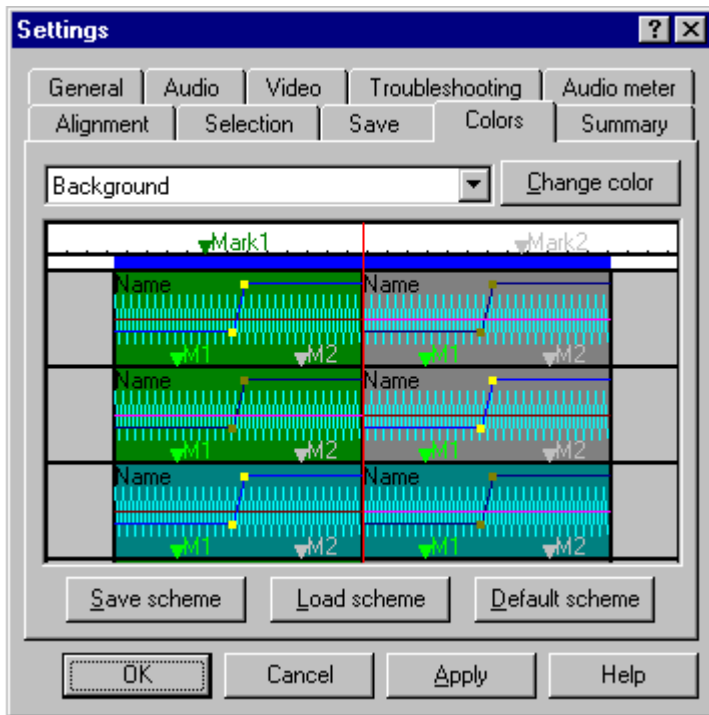
**Save project and clip collection** turns on saving of current project and clip collection at specified period and/or after specified number of project changes.

**Video stamp** turns on saving thumbnail picture for each video clip in clip collection.  
**Waveform picture** turns on saving picture of waveform for each audio clip in clip collection.

**Temporary directory** defines directory for auto-save files and preliminary mixing file. Read/Write access to this directory is required.

## 7. Settings

### 7.9 Colors



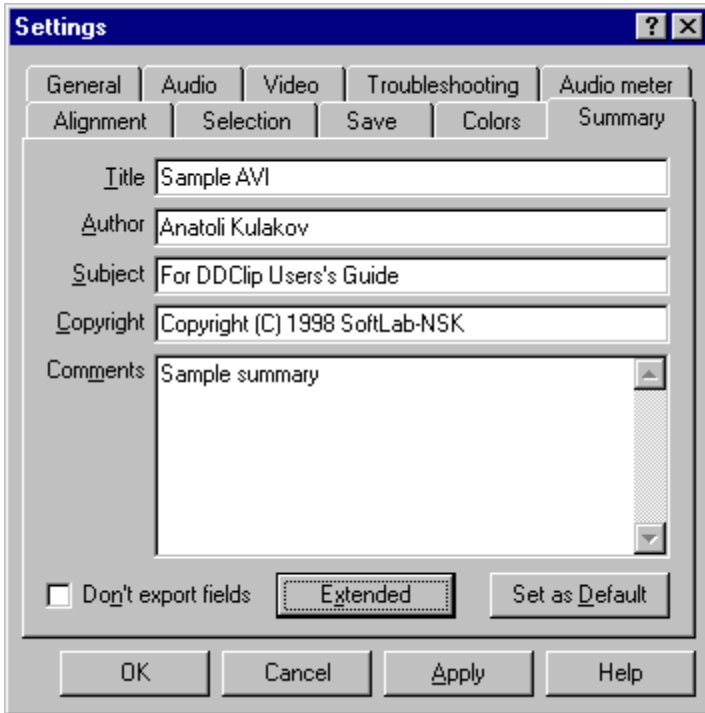
**Change color** calls standard dialog, where new color can be set for item from list. Color settings are reflected in picture. Item also can be selected by click in picture. It is possible to keep mouse button pressed and move around with cursor.

Colors combination can be stored in files that by default have .CLT extension. To save settings click **Save scheme**, then select directory and type a name.

**Load Scheme** allows to restore previously saved colors combination.

**Default scheme** reset to predefined colors.

## 7.10 Summary



Various information fields can be embedded in exported audio and video data files (**Export** command on *Project* window **File** menu). Some of these fields presented in this dialog. Text string with up to 255 characters can be entered as field value.

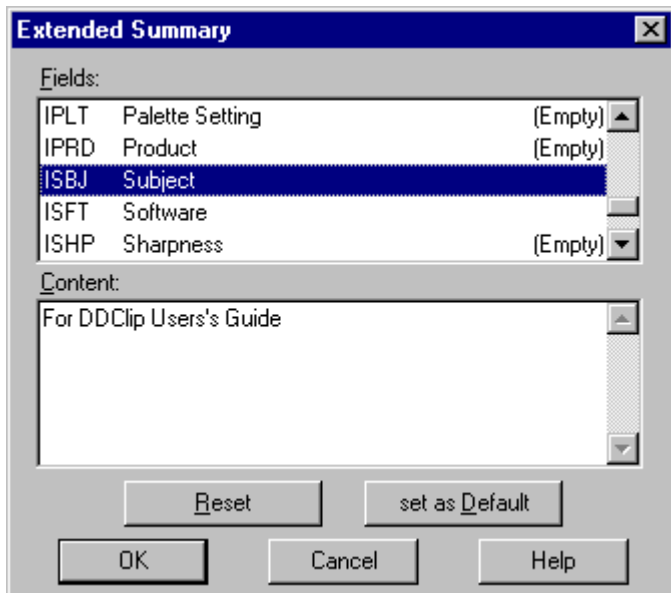
**Don't export fields** if not checked, then all non-empty fields will be included in output. Two additional fields are always saved. One is a name of software package "DDClip V2.23 Multitrack Audio and Video Editor". Another is a creation date in form YYYY-MM-DD; for example, "1998-05-01" for first of May 1998.

**Extended** allows to view and edit ALL available fields in *Extended Summary* dialog, see section below.

**Set as Default** button allows to save all currently defined fields for later usage as default settings for new created projects.

## 7. Settings

### 7.10.1 Extended summary dialog



Fields that can be embedded in exported audio and video data files are available for editing in this dialog. Some of them appear also in **Summary Settings**, see above. Each field is presented by its short name and human readable name. Text string with up to 255 characters can be entered as field value. If field has no associated text string, it has “(Empty)” at the right in list box. Empty fields are not saved, see also description of **Don't export fields** switch in **Summary Settings** section above.

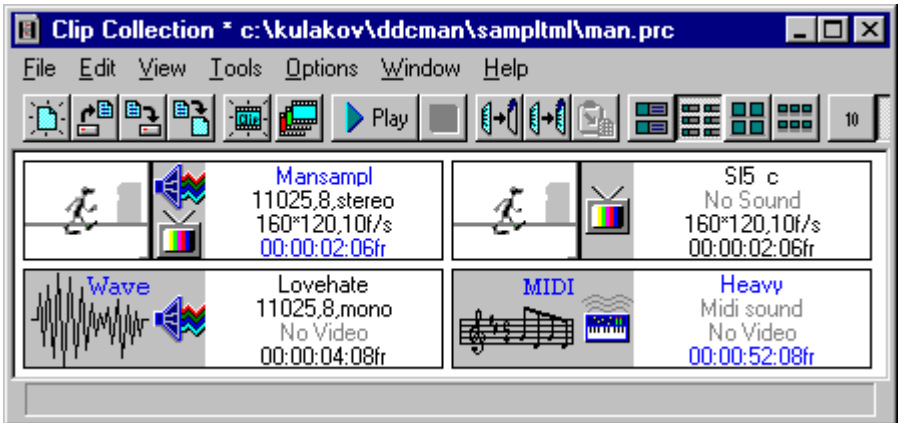
**Reset** button clear summary info.

**Set as Default** button allows saving of currently defined fields for later usage as default settings for new created projects.



## 8 Clip Collection Window

### 8.1 Clip Collection Overview



Clip Collection may be considered as a handy storage with references to audio and video data. When source file is opening a new *Clip* with reference to whole file content is added to Clip Collection.

Each clip is represented by *Clip Info* window. Clips from Clip Collection can be dragged to *Project* window and back. Source files also can be dragged from Windows Explorer window. To change position of *Clip Info* window drag it with left mouse button or use Up/Down/Left/Right keys while **Shift** key is pressed. See section 9.3 for full list of accelerator keys for various operations.

Double-click in background calls *Open Clip* dialog to select source file, see section 6.1.1; then add clip with reference to whole source file content.

Right click in background calls local menu. Commands at bottom control appearance of *Clip Info* windows, see next section.

- |                 |  |
|-----------------|--|
| Add source File | call <i>Open Clip</i> dialog to select source file; then add clip with reference to whole source file content. |
| Paste           | add all clips from <i>Clipboard</i> to Clip Collection.  |



### 8.2 Clip Info window

Window appearance has four variants: **Full Info**, **Basic Info**, **Large Icons**, **Small Icons**. Current presentation can be selected on *Clip Collection* window *Toolbar*, on local menu (right-click in background), on *View* menu.

## 8. Clip Collection Window

Following pictures shows what type(s) of multimedia data clip contains:



If icon is grayed, that means that clip parameters differ from project settings. **Tools** menu may help in conversion to desired parameters.

If clip contain both audio and video data, then **both icons** are displayed. If audio or video is not used (Use **Video** and Use **Audio** in *Clip Properties* dialog, see section below), then corresponding icon appears with red cross over it:



Thumbnail picture for Video clip it can be chosen in *Clip Properties* dialog, Audio and Midi clips has predefined pictures.



**Full info** presentation of Clip Info window is shown above, and is most informative. It provides clip name, source file path, audio parameters (ratio, bits per sample, stereo/mono or 'No sound'), video parameters (width\*height, frames per second or 'No Video'), time **In** and time **Out** (beginning and end position in source file), duration. Thumbnail picture is drawn at left.

**Basic info** is more compact. Except source file path, time **In** and time **Out**, it provides same information as **Full Info**.

**Large Icons** and **Small Icons** presents only clip name, but have different sizes.

Note, that if clip from *Clip Collection* is not used in current project, then text information, such as clip name, is drawn in blue.

Right-click on Clip Info window calls local menu that may contain following:

- |                                 |  |
|---------------------------------|--|
| Play                            | playback this clip.  |
| Change project video parameters | bring project video parameters in accordance with clip video parameters.   |
| Change project audio parameters | bring project audio parameters in accordance with clip audio parameters.   |
| Launch 'clip type' editor       | actual command name depends on clip type and may be <b>Launch Video editor</b> , <b>Launch Audio editor</b> , <b>Launch Midi editor</b> . Editor application is launched with the clip source file name added to command line. 'Editor' path may be set in <i>Configure external applications</i> dialog ( <b>Configure</b> on <b>Tools</b> menu). |

## 8. Clip Collection Window

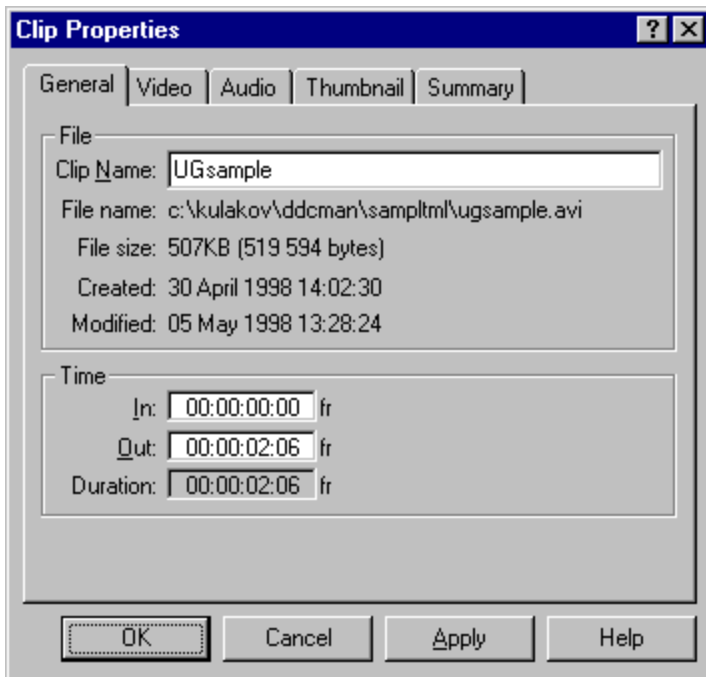
Copy	clear <i>Clipboard</i> and add this clip to <i>Clipboard</i> (clip is placed on first track).
Add	add this clip to <i>Clipboard</i> (clips are added consequently on first track).
Paste	paste all clips from <i>Clipboard</i> in Clip Collection.
Delete	remove this clip from Clip Collection.
Properties	call <i>Clip Properties</i> dialog, see section below.

### 8.3 Clip Properties dialog

Properties command on *Clip Info* window local menu call this dialog. Dialog may contain following tab panels:

General	clip name, size, source file, etc.
Video, Audio, Midi	multimedia data specific info. Use <b>Use Video</b> and <b>Use Audio</b> switches.
Thumbnail	frame for thumbnail picture.
Summary	information field embedded into data source file.

#### 8.3.1 General



**Clip Name** is an arbitrary label that may be associated to a clip. By default, a name of source file is assigned. Clips with different parameters may have same name. Clip name does not identify clip uniquely.

## 8. Clip Collection Window

File Name shows path to source file.

File Size shows source file size in bytes and kilobytes (KB), 1 KB=1024 bytes.

Created and Modified shows source file creation and modification date.

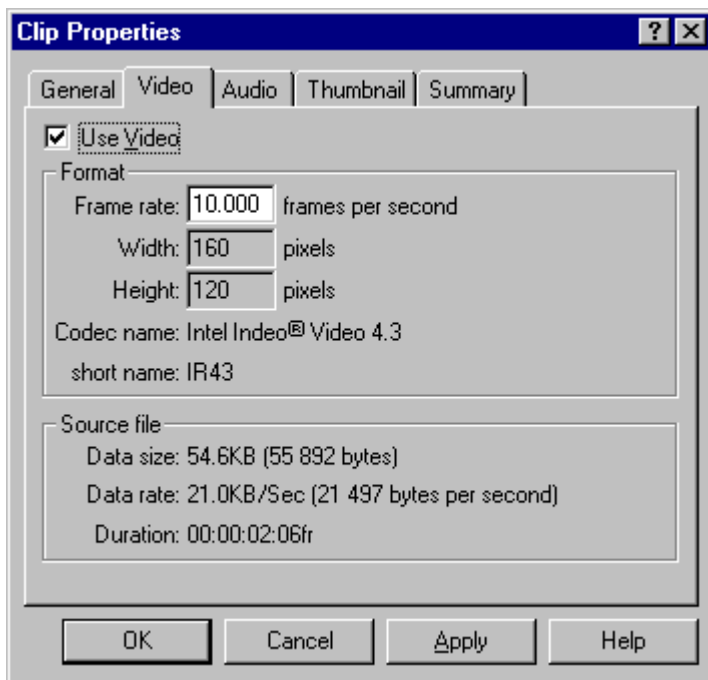
“Time” group fields presents in current time format (View menu) values of following parameters:

**In, Out** – begin and end of clip in source file.

**Duration** – clip duration, effectively difference between **Out** and **In**.

Displayed values depends on current video Frame rate, see section below.

### 8.3.2 Video



This panel appears, if source file contain video data.

**Use Video**, if unchecked disables usage of video data from source file. This has meaning when source file contains both video and audio.

“Format” group comprises following video parameters:

**Frame rate** is measured in frames per second and determines duration of playback for video. Frame rate of source file is displayed in info area at right of *Open Clip* dialog. Frame rate can be changed, if there is no clip(s) in current project that reference video data in source file. NOTE, that current frame rate is used in calculations of **In**, **Out**, **Duration** fields in **General** panel, described in section above, and **Data rate** and **Duration** described below. In no way frame rate changing affects duration of audio playback. If both **Use Video** and **Use Audio** are enabled and current

## 8. Clip Collection Window

frame rate value is increased or decreased from one in source file, then on inserting in project audio will be correspondingly truncated or extended with zeros. It may be found convenient to duplicate clip, then enable only **Use Video** in one copy and only **Use Audio** in another.

**Width** and **Height** presents geometrical parameters of video frame.

**Codec name** and **short name** provides two variants of video CODEC name.

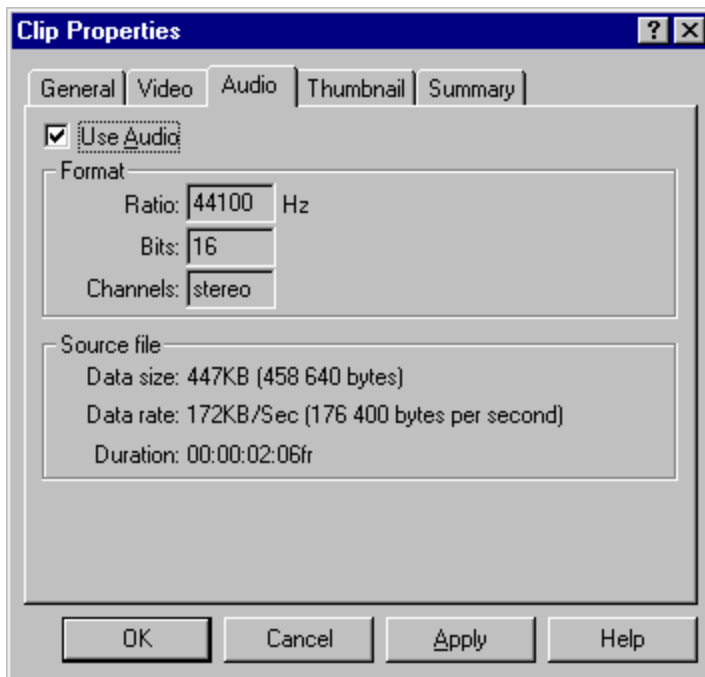
“Source file” provides following information:

**Data size** shows size of video data in source file.

**Data rate** is calculated video data stream, see note above on **Frame rate** changing.

**Duration** shows how long it takes to playback all video that contain source file, time value is presented in current time format, see **View** menu.

### 8.3.3 Audio



This panel appears, if source file contain audio data.

**Use Audio**, if unchecked disables usage of audio data from source file. This has meaning when source file contains both video and audio.

“Format” group comprises following audio parameters:

**Ratio** is a number of samples per second.

**Bits** is a number of bits per sample.

**Channels** shows ‘mono’/‘stereo’ for one or two channels correspondingly.

“Source file” provides following information:

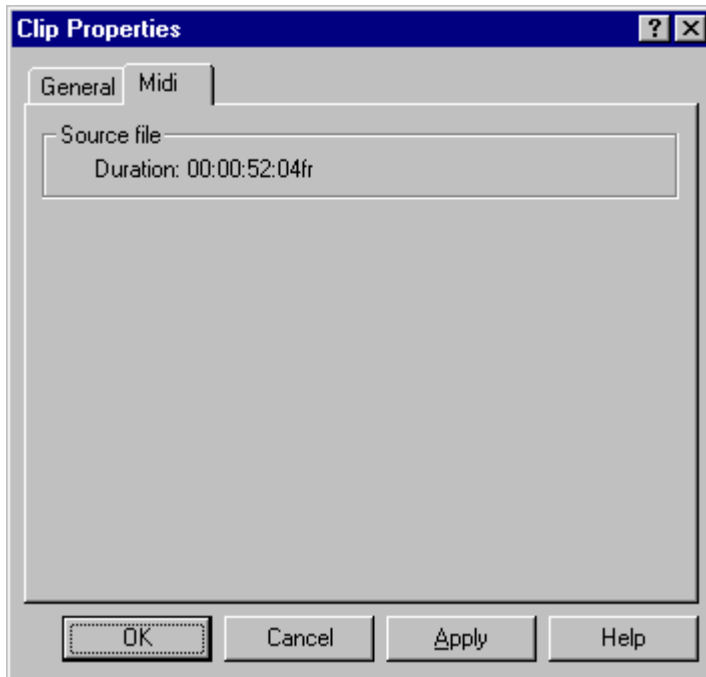
## 8. Clip Collection Window

**Data size** shows size of audio data in source file.

**Data rate** is calculated audio data stream.

**Duration** shows how long it takes to playback all audio that contain source file, time value is presented in current time format, see **View** menu.

### 8.3.4 Midi



This panel appears for source file with MIDI data.

**Duration** shows how long it takes to playback all data from source file. Time value is presented in current time format, see **View** menu.

## 8.3.5 Thumbnail picture

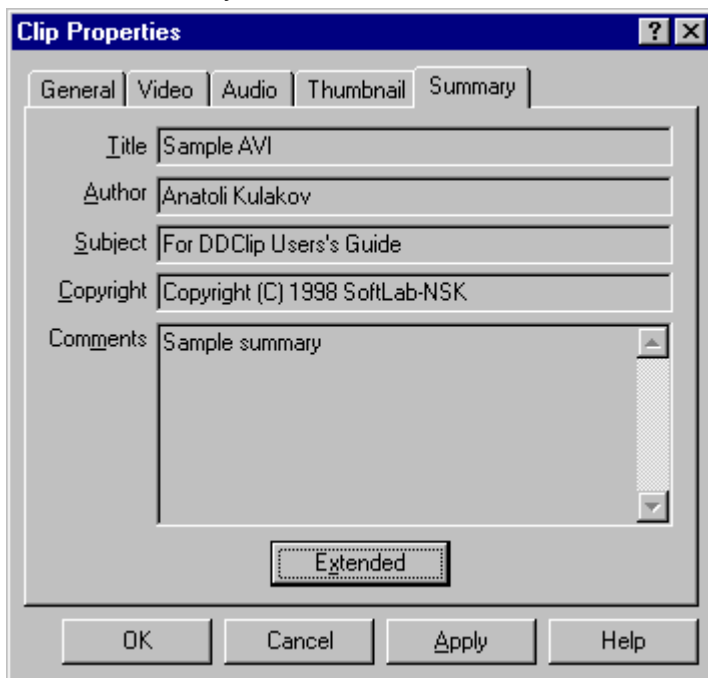


This panel appears, if source file contain video data.

Slide bar allows to select video frame, which will be used as identifying picture in *Clip Info* window.

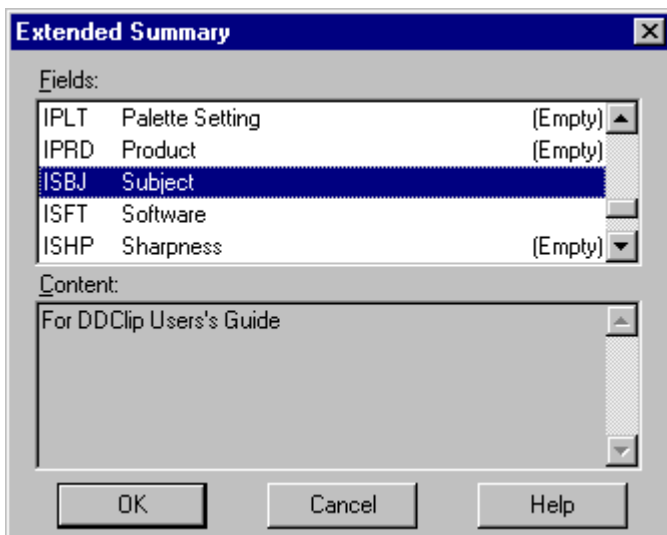
## 8. Clip Collection Window

### 8.3.6 Summary



Clip source file may have various embedded information fields. Some of these fields are presented in this dialog. See also description of *Summary Settings* and *Extended Summary* dialog in section 7.10.

**Extended** calls dialog that provides information on ALL fields, that application understands. If field has no associated text string, it has “(Empty)” at the right in list box.





### 8.4 File menu

New collection	create new (empty) clip collection.
Open collection	open selected clip collection file.
Add source File	add clip with whole source file content.
Add from collection	add all clips from selected clip collection file to current collection.
Save collection	save changes in current clip collection file.
Save collection As	save changes in new clip collection file.

Note that saved clip collections has file name extension .PRC.

List of most recently used clip collection files is appended after **Save collection As**.

### 8.5 Edit menu

Insert	add new source file as clip to current clip collection.
Delete	remove selected clip from current clip collection.
Properties	call <i>Clip Properties</i> dialog, see section 8.3.
Synchronize project video parameters	bring project video parameters in accordance with this clip video parameters.
Synchronize project audio parameters	bring project audio parameters in accordance with this clip audio parameters.
Audio editor	launch 'audio editor' application with the clip source file name added to command line. 'Audio editor' path is defined in <i>Configure external applications</i> dialog.
Midi editor	launch 'midi editor' application with the clip source file name added to command line. 'Midi editor' path is defined in <i>Configure external applications</i> dialog.
Video editor	launch 'video editor' application with the clip source file name added to command line. 'Video editor' path is defined in <i>Configure external applications</i> dialog.
Purge	remove clips which not used in current <i>Project</i> from current Clip Collection.
Add to Clipboard	add this clip to <i>Clipboard</i> (clips are added consequently on first track).
Copy to Clipboard	clear Clipboard and add this clip to <i>Clipboard</i> (clip is placed on first track).
Paste from Clipboard	paste all clips from <i>Clipboard</i> in Clip Collection.

### 8.6 View menu

Full Info	show maximum information about clips.
Basic Info	show basic information about clips.
Large Icons	show clips as large icons.
Small Icons	show clips as small icons.

## 8. Clip Collection Window

Auto Sort	sort clips in clip collection while add new clip.
Sort by Type	sort clips in clip collection by it's type in following order: <i>Video&amp;Audio</i> clips, <i>Video</i> clips, <i>Audio</i> clips, <i>Midi</i> clips.
Sort by Name	sort clips in clip collection by clip name.
Time in Frames	show time as frame counter. See <b>Frame rate</b> parameter in <i>Video Settings</i> . Frame rate is measured in frames per second (fps). For example, at 25 fps frame rate one second time label will be displayed as “25” or “25fr”.
Time in SMPTE	show time in format “hours:minutes:seconds:frames”, or SMPTE. Last parameter is a frame number for current second. One second time label will be displayed as “00:00:01:00” or “00:00:01:00fr”.
Time in Milliseconds	show time in as “hours:minutes:seconds:milliseconds”. One second time label will be displayed as “00:00:01:000” or “00:00:01:000ms”.

### 8.7 Tools menu

Convert WAVE	convert source audio file into another WAVE-file with different parameters. Choose input file and define output file name. Then select desired parameters for output WAVE-file and press OK.
Convert AVI	launch “AviEdit” application that allows to convert source AVI-file into another AVI-file with different parameters.
Convert MScamcorderAVI	before use this command consider possibility to update codec (see URLs below) and then use conventional Convert AVI.  Alternatively, use <b>Convert MScamcorderAVI</b> . Choose source file, then define output AVI-file. Source AVI will be played on screen and grabbed into output AVI. Wait until end of conversion, do not open or minimize windows, etc.

<http://www.microsoft.com/workshop/imedia/netshow/netshow2/tools/cam.asp> had information on update of Microsoft Camcorder and link to file with update:

<http://www.microsoft.com/ntserver/netshow/download/mscamupd.exe>

Both URLs were last checked on 21st of July 1998.

### 8.8 Options menu

Font...	select font for displaying clip information.
Color...	select color for displaying clip name in “Small Icon” mode.
Save Options	safety program settings save. Application automatically save current program settings on exit. These settings will be used at program start. If application was terminated abnormally then program setting will not be saved and last saved options are used.





## 8.9 Window menu










Project                      show *Project* window.

## 9 References

### 9.1 Operations summary

Cursor change it's shape depending on which editing operation can be done.

Action	Subaction	Realization
<b>Call local menu</b>		Click right mouse button.
<b>Start playback</b>		Double click starts playback of project from specified position to end of window.
<b>Clip inserting</b>		<p>Dragged clip (or source file) is displayed as black rectangle.</p> <p>Cursor may have one of following shapes:</p> <p> - clip can not be inserted;</p> <p> - clip can be inserted at place of black rectangle;</p> <p> - clip can be inserted but right part of this track will be shifted to right as whole.</p> <p>Clip will be inserted at left mouse button click.</p>
<b>Selection</b>	Select one clip	Click on desired clip.
	Select clips	Press left mouse button and drag. All clips touched by or within specified box selection will be selected.
	Select/deselect many clips	<p>Press <b>Shift</b> key or turn on <b>Multiselection mode</b> from <i>Toolbar</i> or <i>Edit</i> menu. With  cursor, following actions invert clip(s) selection state (change selected to unselected and vice versa):</p> <ol style="list-style-type: none"> <li>1) click on clip - for this clip;</li> <li>2) double click - for all clips on track after specified position;</li> <li>3) press left mouse button and drag - all clips touched by or within specified box.</li> </ol>
	Clear selection	Click on empty area.

<b>Moving</b>	Move selected clips	 - press left mouse button and drag.
	Move Left clip edge	 - press left mouse button and drag clip edge. For clip with video first frame will be displayed on videoplayer.
	Move Right clip edge	 - press left mouse button and drag clip edge. For clip with video last frame will be displayed on videoplayer.
	Move place mark	 Mark - press left mouse button and drag mark.
<b>Audio volume/ Balance profile editing</b>	Add key points to audio profile	Press <b>Control</b> key or turn on <b>Add profile point mode</b> from <i>Toolbar</i> or <i>Edit</i> menu. In this mode cursor has shape  . Each click inside audio clip rectangle adds new key point at specified position.
	Move profile key point	 - press left mouse button and drag.
	Move horizontal profile segment	 - press left mouse button and drag up or down the horizontal segment of profile (two key points of audio clip profile with equal profile values).
	Shift inclined/vertical profile segment	 - click left mouse button and drag to left or to right the inclined/vertical segment of profile (two key points of audio clip profile with different profile values).
	Delete key point	 - call local menu (right-click) and select <b>Remove profile point</b> .
	Clear audio profile	Call local menu and select item <b>Delete profile</b> . This reset profile to default 0Db constant.

## 9.2 Project Window Accelerators

Action	First accelerator	Second accelerator
<i>File operations</i>		
Open source file		'F4'
New project	Ctrl+'N'	Shift+'F3'
Open project	Ctrl+'O'	'F3'

## 9. References

Copy from project to clipboard	Ctrl+Shift+'O'	Ctrl+'F3'
Save project	Ctrl+'S'	'F2'
Save project as	Ctrl+Shift+'S'	Shift+'F2'
<b><i>Edit operations</i></b>		
Undo	Ctrl+'Z'	Alt+'Backspace'
Redo	Ctrl+'Y'	Alt+Shift+'Backspace'
Delete		'Delete'
Cut	Ctrl+'X'	Shift+'Delete'
Copy	Ctrl+'C'	Ctrl+'Insert'
Paste	Ctrl+'V'	Shift+'Insert'
Insert	Ctrl+'I'	'Insert'
Select all	Ctrl+'A'	
Unselect all	Ctrl+'D'	
<b><i>Zoom operations</i></b>		
Zoom in	Ctrl+'+'	'+'
Zoom out	Ctrl+'-'	'-'
Show whole project	Ctrl+'/'	'/'
Zoom in selected range	Ctrl+'*'	'*'
<b><i>Playback/cursor position operations</i></b>		
Start/Stop playback	'Space'	'Enter'
Stop playback	'Escape'	
Rewind	'Home'	Ctrl+'W'      'W'
Go to next frame	'Right arrow'	
Go to previous frame	'Left arrow'	
<b><i>Scroll operations</i></b>		
Scroll working area to right	Ctrl+'Right arrow'	
Scroll working area to left	Ctrl+'Left arrow'	
Scroll audio tracks up	Ctrl+'Up arrow'	
Scroll audio tracks down	Ctrl+'Down arrow'	
<b><i>Moving of selected clip(s) (with pressed left mouse button)</i></b>		
Move to upper track	'Up arrow'	
Move to lower track	'Down arrow'	
Shift 1 ms to right (audio/midi)	'Right arrow'	
Shift 10 ms to right (audio/midi)	Shift+'Right arrow'	
Shift 100 ms to right (audio/midi)	Ctrl+'Right arrow'	
Shift 1 ms to left (audio/midi)	'Left arrow'	
Shift 10 ms to left (audio/midi)	Shift+'Left arrow'	
Shift 100 ms to left (audio/midi)	Ctrl+'Left arrow'	
Shift 1 frame to right (video)	'Right arrow'	
Shift 10 frames to right (video)	Shift+'Right arrow'	

Shift 100 frames to right (video)	Ctrl+'Right arrow'	
Shift 1 frame to left (video)	'Left arrow'	
Shift 10 frames to left (video)	Shift+'Left arrow'	
Shift 100 frames to left (video)	Ctrl+'Left arrow'	
<b><i>Other operations</i></b>		
Activate Clip Collection window		'F6'
Exit	Ctrl+'Q'	

### 9.3 Clip Collection Accelerators

Action	First accelerator	Second accelerator
<b><i>File operations</i></b>		
Open source file	'Insert'	'F4'
New clip collection	Ctrl+'N'	Shift+'F3'
Open clip collection	Ctrl+'O'	'F3'
Add from clip collection	Ctrl+Shift+'O'	Ctrl+'F3'
Save clip collection	Ctrl+'S'	'F2'
Save clip collection as	Ctrl+Shift+'S'	Shift+'F2'
<b><i>Edit operations</i></b>		
Delete		'Delete'
Add to clipboard	Ctrl+Shift+'C'	Ctrl+Shift+'Insert'
Copy to clipboard	Ctrl+'C'	Ctrl+'Insert'
Paste from clipboard	Ctrl+'V'	Shift+'Insert'
Remove unused clips		Shift+'Delete'
<b><i>Arrange operations</i></b>		
Move current clip up	Shift+'Up arrow'	
Move current clip down	Shift+'Down arrow'	
Move current clip to right	Shift+'Right arrow'	
Move current clip to left	Shift+'Left arrow'	
<b><i>Select operations</i></b>		
Select upper clip	'Up arrow'	
Select lower clip	'Down arrow'	
Select right clip	'Right arrow'	
Select left clip	'Left arrow'	
<b><i>Other operations</i></b>		
Playback		'Enter'
Show project window		'F6'
Exit	Ctrl+'Q'	