

wmmedia

# AnimatorDV

professional



## User's Guide

9.0



1

# Main Program Windows

## 1. MAIN PROGRAM WINDOWS

AnimatorDV consists of four main and six tool windows:

Main:

- Mix window (1)
- Preview (2) from Camera/VCR/ Scanner/other TWAIN/Digital Still Camera - folder
- Project (3)
- Grabber Info (6)

Tool:

- Audioscope (8)
- Onion Skin Blend Settings (7)
- Choma Key (5)
- Zoom (4)
- Frame Average (9)
- X-Sheet – described in chapter 1.10



Main and tool windows of the AnimatorDV system

You can shift the windows freely, fix their size or make them visible or hidden. The window settings (Workspace) can be saved under any name (see chapter ‘2.9 Window’)

### 1.1 Mix Window

The basic window of the program where mixed pictures from different sources are shown:

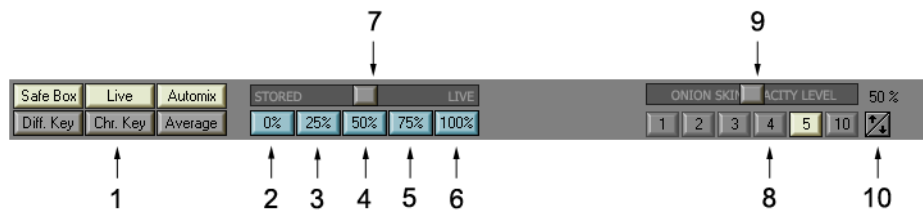
- Picture from the image source (video, TWAIN, folder)
- Sequence frames from disk (Direct Disk Player)
- Rotoscope frames (rotoscopes)
- Backgrounds
- RAM player preview
- Source - disk mix (sequence)
- Source - rotoscope mix
- Source - background mix
- Helpful information – markers, the ‘Audioscope’ module hints



Mix window (here in 16:9 preview mode)

- 1 – window title bar containing the name of the current sequence and the number it consists of (‘Grabbed Frames’).
- 2 – ‘safe area’ frame – defines the safe view area for elements of the recorded scene. ‘Safe’ means that the recorded objects inside this frame will be visible on the TV screen.
- 3 – Example of markers use (automatically generated ‘Title Safe’ markers), – defining safe view area for the most significant elements of the scene (e.g. captions. See chapter 2.7 concerning markers for more details).
- 4 – box where hints with earlier defined comments in the ‘Audioscope’ module are displayed. The comment is possible for each frame separately (see the ‘Audioscope’ module description for more information – chapter 1.5).
- 5 – picture display control panel
- 6 – control panel – transport (for sequence and rotoscope) and grabbing button.

1.1.1 Picture display control panel



1 – display functions:

**SafeBox (safe area) [F11]** – Turns on/off the ‘Safe Area’ frame and the ‘Audioscope’ module hints

**Live [0]**- turns on/off the disc and camera view mix. It is suggested that the ‘Live’ option is turned on. Turning it off makes the picture refresh rate in the ‘Preview’ window higher, what can be useful when setting up the camera or viewing the tape in VCR mode. When the ‘Live’ mode is turned off, no changes take place in the ‘Mix Window’. Turning it on makes the picture from camera visible in the ‘Mix Window’ as well. In this state you can compare stored and live source image. Function is inactive when image source is other than video.

**Automix [F10]** - turns on/off the automated mix setup function. When on, every click on the frame digitalization button (‘Grab’), the camera-disk mix value will be automatically set to 50%, when off – the mix value will remain unchanged.

**Diff. Key (Difference key) [F12]** - turns the difference key on/off. When activated, the difference key shows only shifted parts of a scene. It also allows a control of the set design and camera settings – you can correct accidentally moved objects in an easy way (*the function is available only in the AnimatorDV Professional version*).

**Chr. Key (Chroma key) [C]** – left mouse button click turns the chroma key on/off. Right mouse button click shows/hides chroma key tool window. When activated, the chroma key excluding selected color in the source image and replaces it with part of an image stored on disk (sequence, background or rotoscope). For more information please refer the ‘Chroma Key’ tool window description – chapter 1.7.

**Average** – left mouse button click turns the frame average function on/off. Right mouse button click shows/hides the frame average tool window. When activated, all grabbed images are quality improved (video noise reduction) by uniting several incoming source images into the one. Function is inactive when the image source is other than video. For more information please refer the ‘Frame Average’ tool window description – chapter 1.9.

2 – ‘Stored’ [F5] – sets the mix to 100% of disk view and 0% source preview.

3 – ‘25’ [F6] – sets the mix to 25% of source preview and 75% of disk view

4 – ‘50’ [F7] – sets the mix to 50% of source preview and 50% of disk view.

5 – ‘75’ [F8] – sets the mix to 75% of source preview and 25% of disk view.

6 – ‘Live’ [F9] – sets the mix to 100% of source preview.

7 – slider allowing smooth mix setup within the range of 0-100%.

8 – ‘Onion Skin Level’ [1-6] – sets the frames number of the sequences, which will be used for the onionskin function. This function is a base for creating animations. Owing to it, you can fix the way and the moving speed of recorded objects. The onionskin function activity consists in uniting several frames of a sequence, giving them transparency (onion skin opacity level) in relation to each other. The result is one picture with several former frames. The number of these frames is defined by the present ‘Onion Skin Level’ parameter on the scale 1-99. In addition, AnimatorDV enables a live preview of the camera and mixes it with the onionskin picture. That allows a precise setup for the next position of moving objects. Parameter 1-5 is fixed. The last parameter (here has value of 10) is custom and can be set from 6 to 99.

9 – ‘Onion Skin Opacity Level’ – defines level of the transparency for onionskin function. Actual value shows a label at the right side of the slider.

10 – onion skin custom level value set button – defines custom level of the onionskin function (6-99) and changes a caption of the custom onionskin speed button (here with value 10).



*You can also set the onionskin parameters in the ‘Onion Skin’ tool window [o].*

### 1.1.2 Control panel



1 – information of the displayed frame. This is a number of the current frame in the sequence of the all frames number in the sequence (here – the 23<sup>rd</sup> one of the sequence composed of 43 frames; 1 – the first frame)

2 – time code of the current frame in the sequence, formatted to HH:MM:SS:FF (hour:minute:second:frame; counted from 00:00:00:00 – the first frame)

3 – slider enabling a fast change of the current frame in the sequence.

- ‘G’ – ‘Grabber Mode’ – basic mode – digitalization and camera-sequence mix
- ‘R’ – ‘Rotoscope Mode’ – additional mode – digitalization and camera-rotscope mix
- ‘B’ – ‘Background Mode’ – auxiliary mode – preview – camera-background mode
- ‘RS’ – ‘Roto Sync Mode’ – auxiliary – rotscope file preview – synchronization point setup
- ‘M’ – ‘Markers Set Mode’ – markers setup mode
- ‘RAM’ – RAM Player mode – playing sequence from computer memory

It is possible to hide the mode information by uncheck ‘Show program mode’ option in the Project Settings window.



*Information displayed in the ‘Rotoscope Mode’ and ‘Roto Sync Mode’ on the frames number and the current frame number, applies to the rotscope file. While browsing the frames with the RAM Player function, it applies to the animation reproduced from the memory.*

4 – buttons steering the sequence (described below).

5 – ‘Grab’ – basic program function, which builds the sequences frame by frame. When the ‘Grab’ button is pressed in, the currently displayed frame in the ‘Preview’ window is digitized.

### 1.1.2.1 Buttons steering the sequence



Buttons steering the sequence in the 'Mix Window'

- 1 - go to the first frame
- 2 - go to the previous frame
- 3 - go to the next frame
- 4 - pause – playback interruption
- 5 - playback from the current frame to the end of the sequence
- 6 - playback in loop. Right-Click - Loop playback settings (menu: 'Sequences/Disc Playback Settings...' [Ctrl+P]). If "Use RAM..." option is turned on, first click loading defined amount of frames into RAM. Next clicks just play defined loop. Loading frames to RAM (buffering) is carry out after changes in Loop Playback settings and after selection new sequence.
- 7 - go to the last frame of the sequence

## 1.2 Preview

In this window, a picture is displayed directly from a live preview (camera, VCR) or still (TWAIN - e.g. scanner or folder defined to watch - e.g. Digital Still Camera connected as storage device). If AnimatorDV recognizes that a VCR is connected or a camera is switched on to VCR mode, an additional control panel for steering the VCR (or the camera in VCR mode) will appear in the lower part of the window. Additional control panel has still mode preview as well.

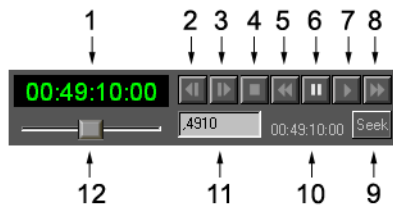
Caption of the 'Preview' window describes from which source image is previewed:

- live video – name of the capture device appears
- TWAIN device – name of the TWAIN device appears
- folder source – path to the folder for watching



'Preview' window in camera mode or VCR without control mode

### 1.2.1 Control panel for VCR



**1** – time code box – each DV tape frame has an attributed time code in format HH:MM:SS:FF (hour:minute:second:frame). The time code is displayed in this place.

#### 2-8 VCR control

**2** – go to the previous frame

**3** – go to the next frame

**4** – stop

**5** – fast rewind (no preview)

**6** – pause

**7** – play the tape

**8** – fast forward (no preview)

**9** – ‘Seek’ button – on the tape it finds a frame with time code given in box 10

**10** – displays interpretation of time code after editing in box 11

**11** – edition box for time code looked for. It is possible to use a point, which does duty for ‘00’. It is not necessary to enter colons, e.g.:

,101010 = 00:10:10:10

2,,12 = 02:00:00:12

10,,, = 10:00:00:00

**12** – winding slider with a preview. It gives following modes: slow playback, normal playback, and fast playback. The function runs both forward and backwards



*Some models of VCRs do not operate the Play Reverse function*

### 1.2.2 Control panel for TWAIN and Folder source



**Auto Grab Preview** – if checked automatically does grab if new image is acquired

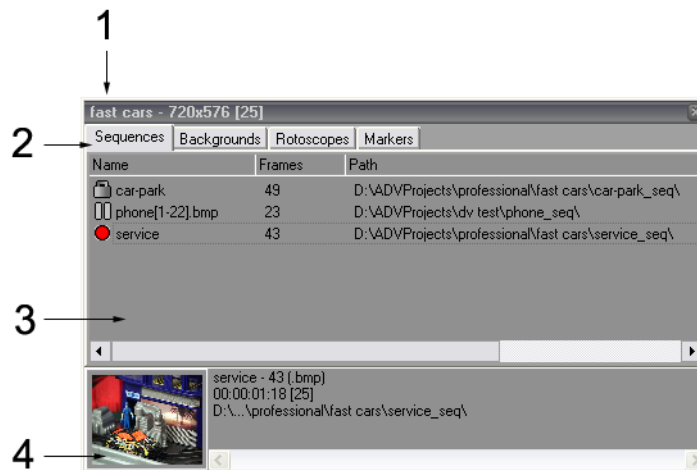
**Get Preview** – active only for TWAIN source – clicked shows TWAIN source interface (e.g. scanner settings and image area selection)



### 1.3 Project Window

This window displays basic information on the project and its components:

- Sequences
- Backgrounds
- Rotoscopes
- Markers



‘Project’ Window

1 – title bar containing the project name (here: ‘fast cars’) the basic picture size (720x576 for PAL DV and 720x480 for NTSC DV) and the base for time code (default [25] for PAL and [30] for NTSC)

2 – bookmarks of individual components of the project

3 – list of sequences, backgrounds, rotoscopes and markers (for the bookmark respectively)

**- sequences:**

- columns

- o *Name* – sequence name
- o *Frames* – number of frames in the sequence
- o *Path* – access path to the folder containing the sequence

- symbols

- o (🔒) – sequence protection against edition, rename or removal
- o (🔓) – sequence unblocked, ready for edition, rename or removal
- o (●) – sequence is active, the current frame is the last one in the sequence
- o (▶) – sequence is active, the current frame is earlier than the last one in the sequence (after digitalization of the frame – ‘Grab’ – the current frame is set as the last)

- context menu (displayed after pressing a sequence with the right mouse button)

- o *Activate/Deactivate* – activates/deactivates a highlighted sequence
- o *Lock/Unlock* – locks/unlocks the marked sequence
- o *New Sequence* – creates a new sequence (see chapter 2.4.1)
- o *Import Sequence* – imports a sequence from disc to the project (see chapter 2.4.2)
- o *Make AVI* – opens a AVI file export window (see chapter 2.4.5)
- o *RAM Player* – opens a RAM Player window for active sequence
- o *Open Folder* – opens a folder containing the marked sequence
- o *Rename* – renames the marked sequence

- *Remove* – removes the marked sequence from the project (the sequence remains on disc – you can reimport it)

**- backgrounds**

- columns

- *Name* – background name
- *Filename* – name of the file on disc that the background is from

- symbols

- (00) – background ready to be displayed
- (▶) – background currently displayed (active)

- context menu

- *Activate/Deactivate* – activates/deactivates a highlighted background
- *Import Background* – imports a background from disc to the project (see chapter 2.5.1)
- *Rename* – renames the marked background
- *Remove* – removes the marked background from the project (the file remains on disc)

**- rotoscopes**

- columns

- *Name* – rotoscopes name
- *For Sequence* – sequence name, for which is rotoscope assigned

- symbols

- (00) – rotoscope ready to be displayed
- (▶) – rotoscope currently displayed (active)

- context menu

- *Set Sync Point* – switches to synchronization point setup mode (see chapter 2.6.2)
- *Remove* – removes rotoscope from the project (the file remains on disc)

**- markers**

- columns

- *Name* – marker name
  - *selection box* – marked – marker visible, unmarked – marker invisible
  - *marker color*
- *X Pos* – horizontal marker position
- *Y pos* – vertical marker position
- *Size* – marker size

- context menu

- *Set Marker Properties* – displays marker properties window (see chapter 2.7.8)
- *Hide Selected* – hides selected markers
- *Show Selected* – shows selected markers
- *Remove* – removes the marker from the project

**4** – information box containing preview frame (the first frame in a sequence, a rotoscope, or background) and information on the marked element as well:

**- for sequence**

- *sequence name* – a number of frames in a sequence (graphic format)
- *sequence duration*
- *path to the folder containing a sequence*

**- for background**

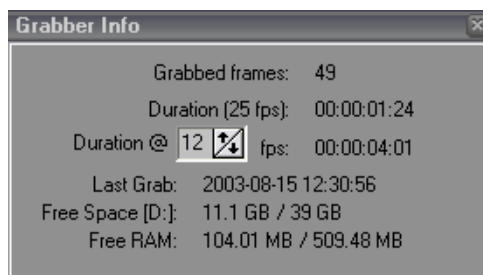
- *filename*
- *path to the file*
- *size* – width x height

**- for rotoscope**

- *name* – size width x height
- *rotoscope file duration*
- **sync at:** time code for synchronization point
- **step:** number of steps indicating which every step the rotoscope frames will be collected. Default is set to number 1, which means that every rotoscope will be displayed, 2 means every other, 3 – every third frame and so on.

## 1.4 Grabber Info

The ‘Grabber Info’ window displays information on digitalized (active) sequence and system information as well.



**Grabbed frames** – defines the number of frames in the active sequence

**Duration (25 fps)** – defines duration of the active sequence. In the brackets, there is a base of time code – number of frames per second. The time code base you can define in the ‘Project Settings’.

**Duration @ nn fps** – quick fps calculator - defines duration of the active sequence for value given in the edition box (here: nn=12)

**Last Grab** – displays time of the last digitalization of a frame

**Free Space [E:]** – defines the amount of free space on disc, where the active sequence is placed, and its total capacity. Information is displayed in red color if the disc capacity is less than 10 MB. In that case, it is recommended to remove redundant information from disc or to choose another disc.

**Free RAM** – defines free RAM amount and its total size. Information is displayed in red color if the free memory space is smaller than 10 MB. In that case, it is recommended to exit all other running applications or to restart computer.



*It may happen while starting that AnimatorDV displays a message on insufficient memory amount to run. If other applications are running, you should exit them and try to restart the AnimatorDV system.*

## 1.5 Audioscope [A]

Displays a graph of audio files, divides into frames and BPM (beats per minute). In every frame, there may be a comment. ‘Audioscope’ is synchronized with the active sequence. As opposed to Rotoscope files, an audio file is not attributed to a specific sequence. The file may contain e.g. an actor’s lines, a dialog or a musical composition, to which a video clip is being created. One audio file can be used for several sequences. The synchronization point is set in two ways:

- synchronization to the first frame of the active sequence
- synchronization to the last frame of the sequence (more in chapter 1.5.1)

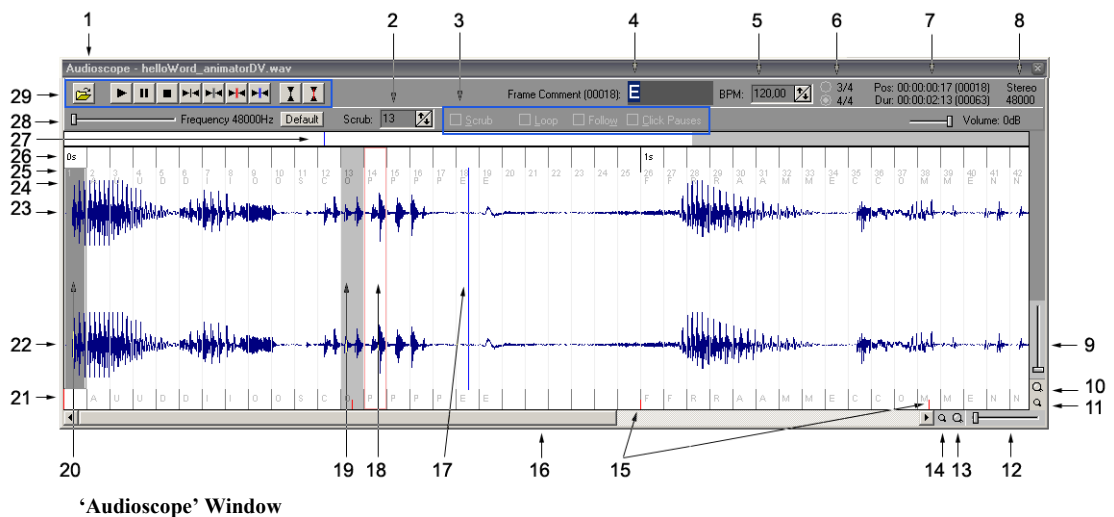
The synchronization point can be changed any time. It is memorized together with the project.

A comment for every frame may be used i.e. for determining syllables in the statement (phonemes). This message is displayed as a hint in the left top corner of the ‘Mix Window’.

It applies to a frame not digitalized yet (‘Grab Frame’). That means, on the ground of the comment you can suitably prepare recorded objects and then digitize them to the sequence. ‘Audioscope’ will automatically go over the next frame of the audio file and display the next comment.

The comment is memorized in the file created in the project folder. Its name originates from the audio filename; in this connection, you should avoid giving the same name to different audio files (e.g. in different folders). It is recommended to create an extra folder to place all files used in the project in. You can copy comment file (\*.adi – audioscope info) to other project, which uses the same audio file.

After work with audio frames is recommended to close window ‘Audioscope’ before digitizing. It is not necessary, but active ‘Audioscope’ window turns off main shortcuts.



‘Audioscope’ Window

1 - window title bar – contains the window title and the name of an open file

2 - Scrub - a function that plays the selected frame in loop. The box indicates, which frame is played. Indicating the ‘Scrub’ frame is possible also by double-click on the audio graph field. The ‘Scrub’ value is symbolized by a light-gray rectangle (p. 19). The value varies also when browsing the sequence by means of the help buttons in the ‘Mix Window’.

3 - file play control module:

**Scrub** - turns on/off playing the frame in loop. If this option is active and the graph space on the right

side of the light-gray rectangle (Scrub Cursor), indicating the 'Scrub' frame (p. 19) is clicked, it will then automatically turn on the frame-in-loop playback.

**Loop** - turns on/off playback of the whole file in loop.

**Follow** - if this option is on, the file preview will be automatically centered in the cursor position while playing (p.17).

**Click Pauses** - turns on/off an option that stops the playback at mouse click position in the graph space. If the option is unmarked, the playback will be continued in the place of clicking.

**4** - comment box for frame. After every change of the cursor position (p. 17), the comment box is ready for content change by clicking or changing the active value of the 'Scrub' option. You do not need to click the field for edition each time – the 'Audioscope' module does it automatically.

**5** - BPM (beats per minute) - box defining the BPM values. After the value is changed, the BMP indexes (p. 15) are suitably set.

**6** – defines the number of beats in the bar – 3/4 - three, 4/4 - four

**7** - Pos - information on time code and the frame number with the cursor (Position Cursor) in. This is an absolute position in file, independent from the Audio Sync Point (p. 20).

- Dur - duration (number of frames) in the displayed file.

Time code is counted on the ground of the Frames Per Second Base value, which can be changed in the program settings (see chapter 2.3.7.1).

**8** - information on the open file type.

**9** - slider for fast zoom in/out of the vertical audio graph. If the file sound is recorded too low or too loud, you can use this slider to adjust the sound visualization.

**10** - precise zoom in of the vertical audio graph.

**11** - precise zoom out of the vertical audio graph.

**12** - fast zoom in/out slider of the horizontal audio graph. The audio file is drafted as a whole when opened. In order to have the number of frames and the formerly written comments (p. 24, 25) displayed, you should zoom in the graph.

**13** - precise zoom in of the horizontal audio graph.

**14** - precise zoom out of the horizontal audio graph.

**15** - BPM points calculated on the ground of the value given in p. 5. The longer line stands for accent.

**16** - scrollbar for browsing the audio graph. It is activated at the horizontal zoom in.

**17** - Position Cursor - a vertical blue line symbolizing the cursor determining current position in the audio file. For details please refer p. 7.

**18** - Grab Frame – a red frame symbolizing non-digitalized picture of the camera. If there is a comment in the red frame, it will be displayed in the left top corner of the 'Mix Window' preview. That will allow proper adjustment of recorded objects.

**19** - Scrub Cursor - a light-gray rectangle defining the 'Scrub' value (p. 2).

**20** - Audio Sync Point - a dark-gray rectangle defining the synchronization point of an audio file

with the active sequence. There is or will be the first frame of the active sequence in the place of Audio Sync Point. A change of the synchronization point is possible in two ways – synchronization to the first frame in the sequence or synchronization to the last frame in the sequence (see p. 29 for more information).

**21** - area where auxiliary information is displayed:

- division for frames
- comment for frame
- division of BPM (p. 15)

**22** - graph of the right audio file channel

**23** - graph of the left audio file channel



*If the open file is monophonic, only one channel vertically centered will be displayed.*

**24** - comment for frame

**25** - numbers of frames counted from Audio Sync Point on (p. 20). Numbers of audio frames correspond with numbers of frames in the active sequence.

**26** - auxiliary information area

- division for seconds (longer black lines) and the value
- division for frames (shorter gray lines)
- '<sync -x' symbol indicating that Audio Sync Point is x frames above the audio file beginning (see chapter 1.5.1 for more information).

**27** - area of the complete audio file preview:

- the white area symbolizes the file part that is visible
- the gray one -- the file part beyond the preview
- the vertical blue line – the cursor position

The area reacts to click by changing the cursor position.

**28** - slider defining frequency for the played file. Lower values cause the file to be reproduced slower. That allows more precise interpretation of the reproduced file, and fixing a comment for the frame. It is recommended to use it together with the 'Scrub' function (p. 2, 3). For setting audio file playback to default frequency, press 'Default' button.

**29** - control panel for audio file


### 1.5.1 Control panel for audio file



**1** - opens an audio file. The accepted format is 'wav'.

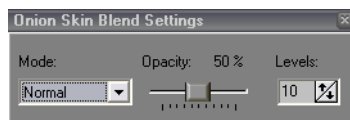
**2** - playing the opened file. If the 'Loop' option is marked (p.3, chapter 1.5), the playback proceeds in loop.

- 3 - pause – stops the playback in the cursor position.
- 4 - stop – stops the playback and goes over to the file beginning.
- 5 - go over to the ‘Audio Sync Point’ frame.
- 6 - go over to the ‘Scrub’ frame.
- 7 - go over to ‘Grab Frame’.
- 8 - go over to the frame with the cursor in.
- 9 - sets ‘Audio Sync Point’ in the frame with the cursor in. ‘Grab Frame’ will be set as many frames further as many they are in the active sequence, e.g.: the cursor is in the frame 100, the sequence is 30 frames long. When the button pressed in, there will appear a dark-gray rectangle (‘Audio Sync Point’) in the frame 100, and a red frame (‘Grab Frame’) in the frame 130.

 *If the ‘Grab Frame’ goes beyond the range (duration) of an audio file, a red rectangle will be displayed in the last frame. That applies to setting up the synchronization point (‘Audio Sync Point’) and to changes of ‘Grab Frame’ during digitalization of the frames to a sequence.*

- 10 - sets ‘Grab Frame’ in the frame with the cursor in and ‘Audio Sync Point’ as many frames in advance as many they are in the active sequence, e.g.: the cursor is in the frame 100, the sequence is 30 frames long. When the button pressed in, a red frame (‘Grab Frame’) will appear in the frame 100, and a dark-gray rectangle (‘Audio Sync Point’) in the frame 70.

## 1.6 Onion Skin Blend Settings [O]

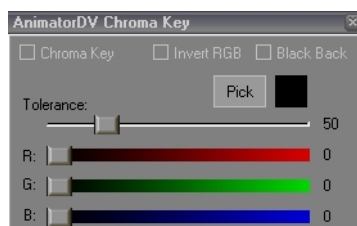


**Mode** – defines one of blending modes: Normal, Lighten, Darken, Overlay, Soft Light, Additive, and Subtractive. Choice is depending on the light condition and colors in the shooting scene.

**Opacity** – defines the transparency of the mixed frames. For Normal mode set the opacity from 30 to 50%. For the rest 70 to 100% for best results.

**Levels** – defines how many frames from the sequence will be mixed.

## 1.7 Chroma Key [C]



Operation of Chroma Key functions causes replacement of chosen color with sequence, background, rotoscope picture or black.

**Chroma Key** – selected turns on the Chroma Key function.

**Invert RGB** – inverts the RGB values (setting value of Tolerance to 128 is recommended)

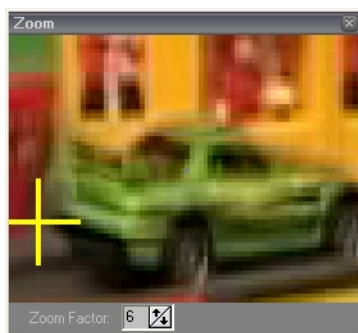
**Black Back** – replaces keying color with black instead the picture. It helps to define Chroma Key range.

**Pick** – switches ‘Mix Window’ to Color Picker for set a color to keying. Selected color appears in a box at the right side of the Color Picker button.

**Tolerance** – defines tolerance for keying color. Higher value (0-250) causes higher range of Chroma Key operation.

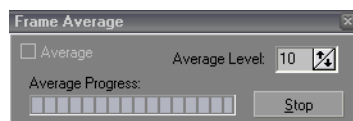
**R, G, B** – level of color component.

## 1.8 Zoom [Z]



In the window, a zoomed in (magnified) part of the picture of the ‘Mix Window’ is displayed. In the ‘Zoom Factor’ box, the zoom in value is fixed in the range of 2 – 30 [≠]. A little cross in the center of ‘Zoom’ window represents the current position of mouse cursor. Information in the ‘Zoom’ window is refreshed just as the cursor is shifted in the ‘Mix Window’ preview area. Zoom may be useful i.e. for precise setting of markers.

## 1.9 Frame Average



**Average** – selected turns on quality improvement function (noise reduction). This extends time which is needed to grab a frame from camcorder

**Average Level** – defines level of quality improvement. Higher value brings better quality (1-99).

**Average Progress** – progress bar of Average function operation.

**Stop** – button to cancel the Average operation.



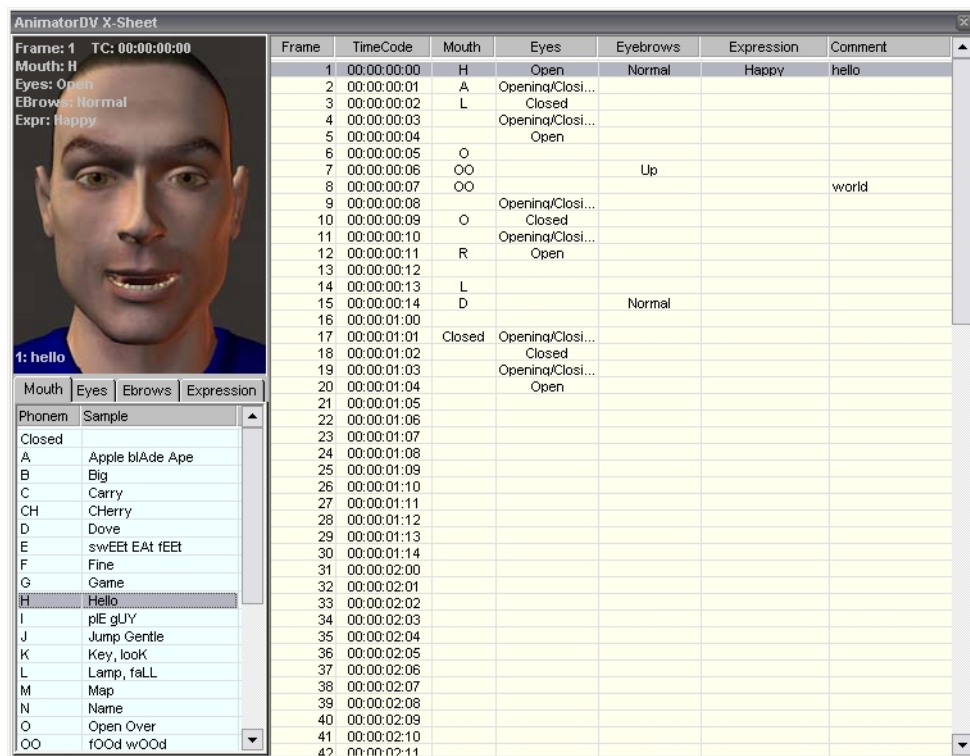
### 1.10 XSheet

Xsheet module is designed for creating advanced face setup – mouth phonem, eyes state, eyebrows state and expression.

For editing Xsheet variables, first load an audio file into the Audioscope module (see 1.5.1).

The Xsheet window consists of three areas:

- Face Monitor - with face preview and helpful details – frame number, time code and states of parts of the face
- Variable Source – light-blue area with all available variables can be set within Xsheet
- Xsheet Monitor – light-yellow area with columns: Frame, TimeCode, Mouth, Eyes, Eyebrows, Expression and Comment divided to frames based on Audioscope data.



#### 1.10.1 Setting variables

For set a variable, select a frame in the Xsheet Monitor (light-yellow) and double click on selected part in the Variable Monitor (light-blue). Selected variable will be automatically copied into appropriate column in selected row (frame).

#### 1.10.2 Adding a comment


For add a comment double click on selected row in Xsheet Monitor (light-yellow). Write a comment and press Enter.

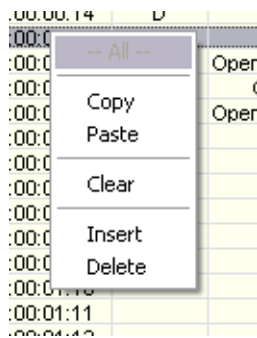
### 1.10.3 Editing Xsheet variables

Xsheet Module offers several basic editing methods:

- copy – copies selected frames into the clipboard
- paste – pastes from clipboard to selected row – it overwrites variables
- clear – clears selected rows – variables doesn't change their position
- insert – inserts amount of selected rows from first in selection - variables from first selection goes down
- delete – deletes amount of selected rows from first in selection - variables from first selection goes up

To determine edit operation, select one or more rows and right-click on it (for paste edit select just one row).

 You can edit variables for each column separately. It depends on chosen column. First position (grayed) in popup menu with editing functions, shows for which column operation will be performed. For editing all variables simultaneously right-click on first or second column (Frame or TimeCode column)



A large, light gray, stylized number '2' that serves as a background graphic. It is composed of two thick, curved segments. The top segment is a semi-circle, and the bottom segment is a larger curve that extends downwards and to the left, ending in a horizontal bar at the bottom. A large black number '2' is positioned in the upper right quadrant of the top semi-circle.

# 2


## **Description of The Menu Functions**


## 2. DESCRIPTION OF THE MENU FUNCTIONS

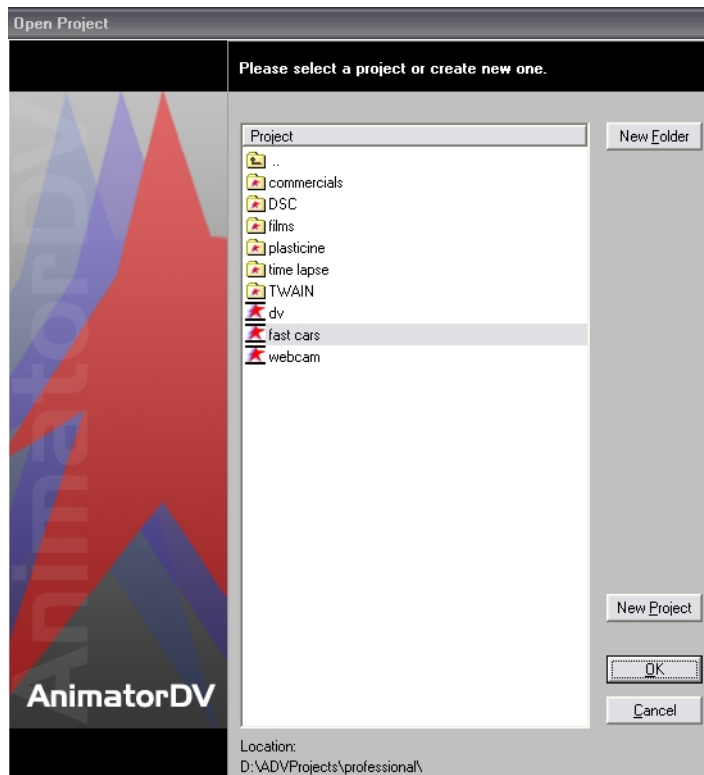
### 2.1. File

#### 2.1.1 Open project

Displays the 'Open Project' window in which a saved project can be opened or a new project can be created.

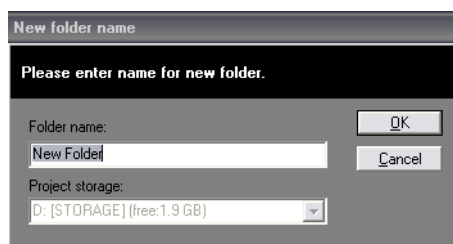
 Thanks to Joined Storage all folders and projects are visible in one 'Open Project' window even though their actual location is on different drives. The location tag can verify the exact location of the files

 After first show, caption of the 'Exit' button changes to 'Cancel'



'Open Project' dialog window

**New Folder** - displays new folder creation dialog window.



New folder creation dialog window

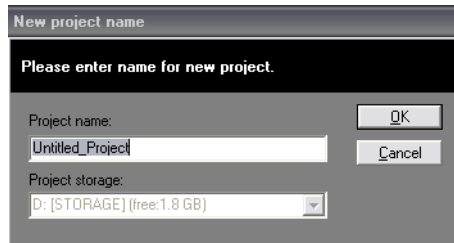
*Folder Name* - defines the name for the new folder.

*Project Storage* - defines the drive on which the folder will be located.

*OK* - hides the new folder creation dialog window and creates a new folder. The program will automatically go to the new folder in the 'Open Project' window.

*Cancel* - hides the window unchanged.

**New Project** - displays new project creation dialog window



**New project creation dialog window**

*Project Name* - defines the name of the new project.

*Project Storage* - defines the drive on which the projects will be located.

*OK* - hides the 'New Project' and 'Open Project' windows. The program is ready to work within the created project.

*Cancel* - hides the window and returns to 'Open Project'.

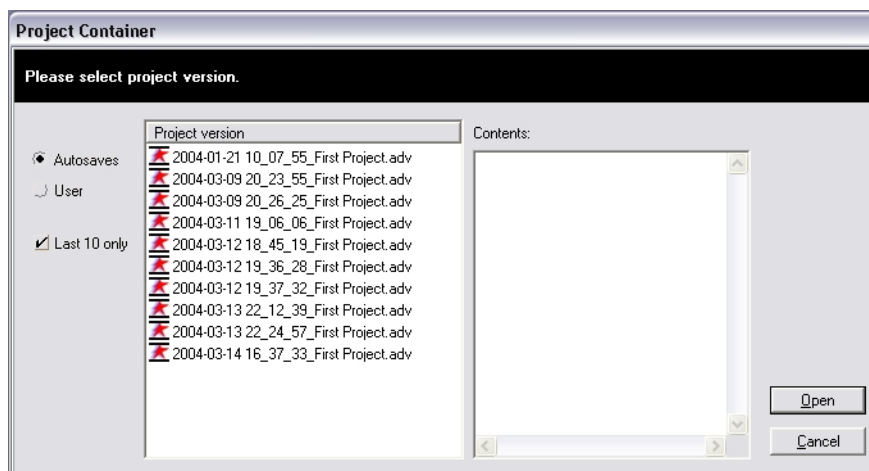
*OK* - displays the indicated project.

*Cancel* - hides the Open Project window.

*Location* - shows the physical location of the folder.

### 2.1.2 Open Project from Container

Displays the 'Project Container' window. 'Project Container' is used to save different versions of one project.



**'Project Container' dialog window**

**Autosaves** - displays directory with all automatically created by AnimatorDV versions of the project in the 'Project Version' frame. Each new version includes a prefix – date, time of copy and name of the project.

**User** - displays the directory including different versions of the project saved by the user in "Project Version" window.

**Last 10 only** – checked displays only the last ten project in the "Project version" box. Unchecked displays all saved projects.

**Contents** - displays the preview of the indicated version.

**Open** - opens the indicated version.

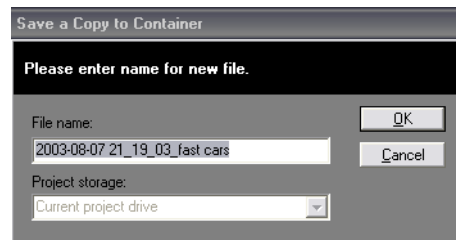


*After exiting the AnimatorDV system, the version chosen from the 'Project Container' is saved as the main project, and the project itself is placed in the 'Project Container'.*

**Cancel** - hides the Project Container window.

### 2.1.3 Save a Copy to Project Container

Allows saving the project version to the 'Project Container' under any given name. The version can be then found in the 'Project Container – User' directory.



'Save a Copy to Container' dialog window

**File Name** - defines the filename for the project version.

**Project Storage** - defines the drive on which a folder will be created.

**OK** - hides the window, creates and saves the file.

**Cancel** - hides the window without saving any changes.


### 2.1.4 Recent

Displays the previous projects list (excluding the current project).

### 2.1.5 Exit


Exits the AnimatorDV system.


## 2.2. Edit

 The navigation buttons in the 'Mix' window are to determine current frame (▶ symbol) within the sequence (graph 1-2-4), chapter 1.2.1.1

### 2.2.1 Undo

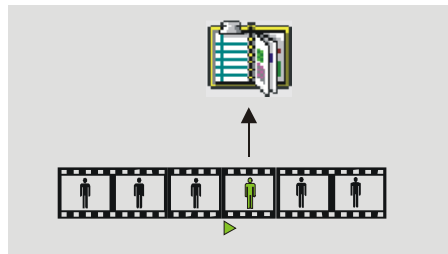
It undoes the previous operation. This concerns deletion, insertion and duplication of frames within a sequence and deletion of the project parts – sequences, backgrounds, rotoscopes, and markers.

 Frames deleted from a sequence are not removed from the disk but saved in the "Delete" folder located in the current project directory. A copy of a removed frame is there for the 'Undo' function; the user can also take advantage of it.

 The 'Undo' function works only within the range of an active sequence. If e.g. a frame of one sequence is removed, after activation of another sequence the 'Undo' is unavailable.

### 2.2.2 Copy

It copies the current frame from an active sequence to the clipboard. The image in the clipboard is available for AnimatorDV and other graphical applications.



▶ - current frame of the sequence

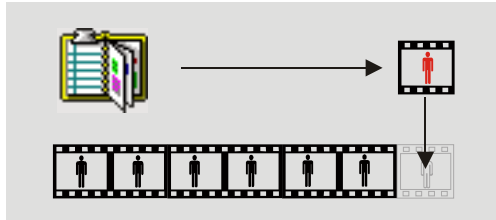
'Copy' function operation scheme

### 2.2.3 Copy Merged Mix Preview

It copies the current view in Mix Window to the clipboard. Described above Copy functions copies image from the active sequence only. "Copy Merged..." can to copy Live or mixed Live and Stored view as well. This function works without an active sequence.

### 2.2.4 Paste (append)

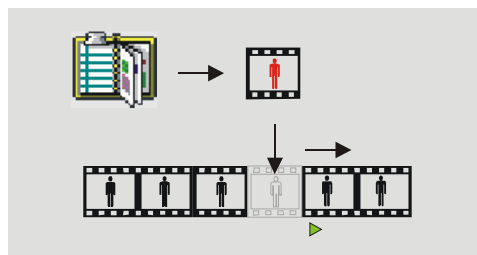
It takes the image from the clipboard and pastes it as the last frame in an active sequence. The image may come from any sequence or other graphical application.



'Paste (append)' function operation scheme

### 2.2.5 Paste (insert)

It takes the image from the clipboard and pastes it before the current frame in an active sequence. The image may come from any sequence or other graphical application.

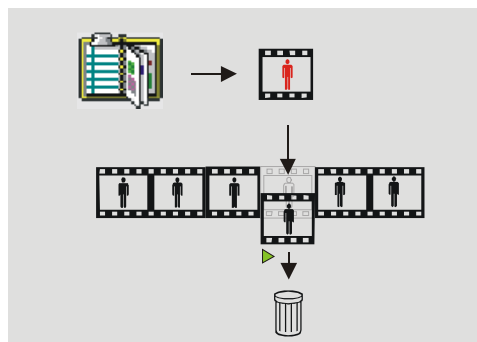


▶ - current frame of the sequence

'Paste (insert)' function operation scheme

### 2.2.6 Paste (replace)

It takes the image from the clipboard and replaces the current frame of an active sequence with it. The image may come from any sequence or other graphical application.



▶ - current frame of the sequence

'Paste (replace)' function operation scheme



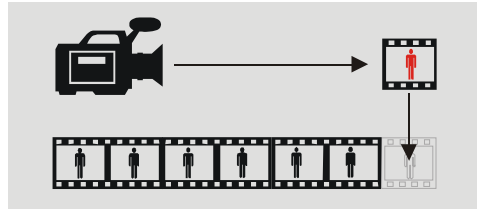
The 'Paste' function works only when the image on the clipboard and the sequence are of the same size.



## 2.2.7 Frame digitalization ('Single' mode – one frame)

### 2.2.7.1 Grab Frame

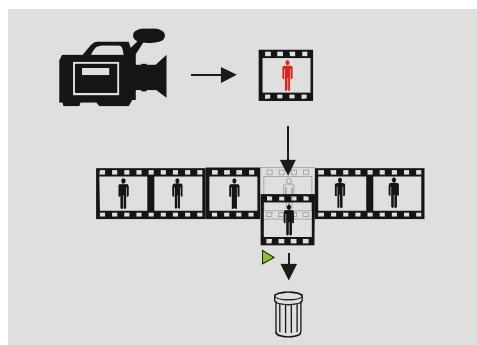
Digitalizes the camera image and includes it to the sequence as the last frame. It also works this way when the current frame of the sequence is not last.



'Grab Frame' function operation scheme

### 2.2.7.2 Replace Frame

It replaces the current frame of the sequence with the camera image.

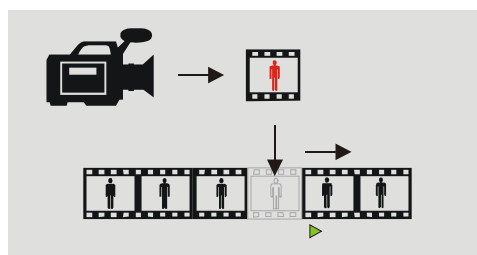


► - current frame of the sequence

'Replace Frame' function operation scheme

### 2.2.7.3 Insert Frame

Inserts the camera image before the current frame of the sequence.

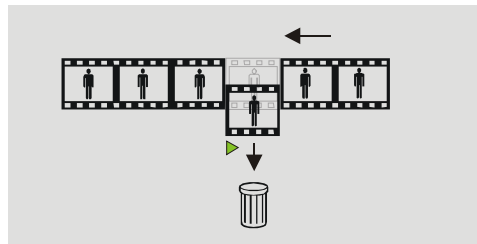


► - current frame of the sequence

'Insert Frame' function operation scheme

### 2.2.7.4 Delete Frame

Deletes the current frame of the sequence.

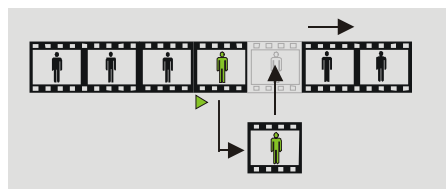


▶ - current frame of the sequence

‘Delete Frame’ function operation scheme

### 2.2.7.5 Duplicate Frame

It duplicates current sequence frame. New frame is placed after the source frame.



▶ - current frame of the sequence

‘Duplicate Frame’ function operation scheme

### 2.2.8 Frame digitalization (‘Multiple’ mode – multiple frames)

The operation in ‘Multiple’ mode is similar to ‘Single’ mode. Although in the ‘Multiple’ mode given function is repeated as many times as was indicated.

After selection of the ‘Multiple’ function a dialog window is displayed in which number or repetitions of a selected function must be defined. Repetition ranging from 2 to 30 times may be chosen. Additionally you can set one of the eight predefined options. Each grabbing option can be defined as a shortcut. The shortcut grabs defined number of frames without displaying the window.

At the lower part:

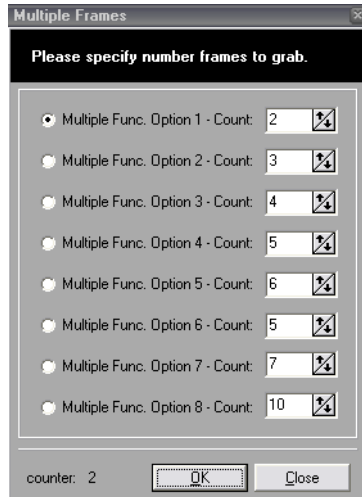
counter – displays chosen value

OK – perform selected operation

Close/Cancel – interrupts performed operation and closes the window

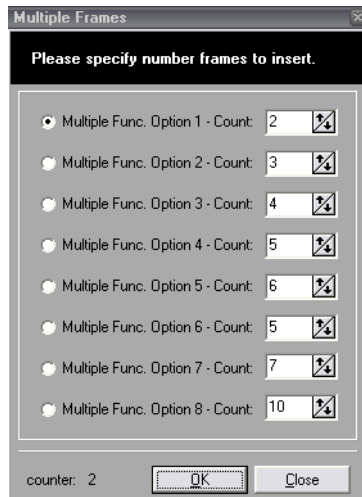
### 2.2.8.1 Grab Multiple Frames

Digitalizes source image and repeats the operation as many times as was indicated (value at 'counter' caption). New frames are attached at the end of sequence.



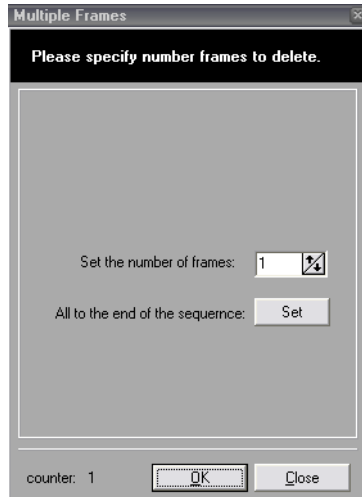
### 2.2.8.2 Insert Multiple Frames

Digitalizes the source image and pastes it as many times as indicated before the current sequence frame.



### 2.2.8.3 Delete Multiple Frames

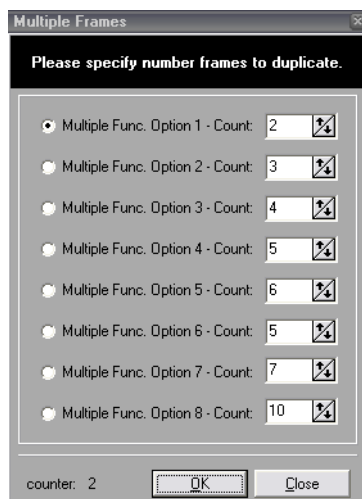
Deletes the defined number of frames from the sequence beginning with the current frame to the end of the sequence.



**Set** – calculates number of frames from the current to the end of active sequence, e.g. if the sequence has 100 grabbed frames and the current frame is 70, 'Set' button sets the number of frames to 30.

### 2.2.8.4 Duplicate Multiple Frames

Duplicates the current frame by the given number of times. New frames are pasted after the source (current) frame.



## 2.3 Project

### 2.3.1 Grabber Mode [F2]

The basic work mode of the AnimatorDV system. Main use of the mode is creating sequences.



*Live mix: camera and images from sequences located on hard drive*

### 2.3.2 Background Mode [F3]

This mode is helpful in special effect creation. Its use is in displaying previously imported backgrounds and mixing them live with the camera image, e.g. it can be useful in actor placement in previously generated with 3D animation program scenery.



*Live mix: camera and backgrounds from the hard drive*

### 2.3.3 Rotoscope Mode [F4]

In this mode it is possible to create (emulate) animation based on the movie material (AVI), in which e.g. movement of characters, lips, objects may occur. After choosing the 'Rotoscope Mode' it is also possible to set up the synchronization point (see chapter 2.6.2). In order to switch the system into the 'Rotoscope Mode' first a sequence, which has a rotoscope file assigned to it, must be activated.



*Live mix: camera and movie material from hard drive*

Source and movie material mix control	
<b>Stored Only [F5]</b>	- 100% hard drive image, 0% source image
<b>More stored [F6]</b>	- 75% hard drive image, 25% source image
<b>Halfmix [F7]</b>	- 50% hard drive image, 50% source image
<b>More Camera [F8]</b>	- 25% hard drive image, 75% source image
<b>Camera Only [F9]</b>	- 0% hard drive image, 100% source image

**Auto Halfmix [F10]** - turns on/off the automated mix setup function. When on, every click on the frame digitalization button ('Grab'), the **source** -disk mix value will be automatically set to 50%, when off – the mix value will remain unchanged.

### 2.3.4 Safe Area [F11]

Displays the gray window-defining frame, within which the elements of the recorded scene will be completely visible on the TV screen. For more certainty than nothing is 'cut' the 'Generate Title Safe Markers' function can be used from the 'Markers' menu.

### 2.3.5 Difference Key [F12]

Switches the preview work mode in 'Mix Window' to the Difference Key. In this mode only differences between camera and hard drive image are visible. This allows to precisely control elements of the scene and also makes correction of accidentally moved camera easier. After choosing this option onionskin level is switched to 1.

### 2.3.6 16:9 Squeeze Preview Mode

Switches preview in the 'Mix Window' to 16:9 proportion. It squeezes the preview.

### 2.3.7 16:9 Mask Preview Mode

Switches preview in the 'Mix Window' to 16:9 proportion by adding two black bars – the mask.

### 2.3.8 Settings

Displays the project settings window. From version 9.0 is possible to select one from three sources:

- Video (e.g. DV, analog video or webcams)
- TWAIN (e.g. scanner or WIA device)
- Folder (e.g. watchdog for Digital Still Cameras or selected folder)

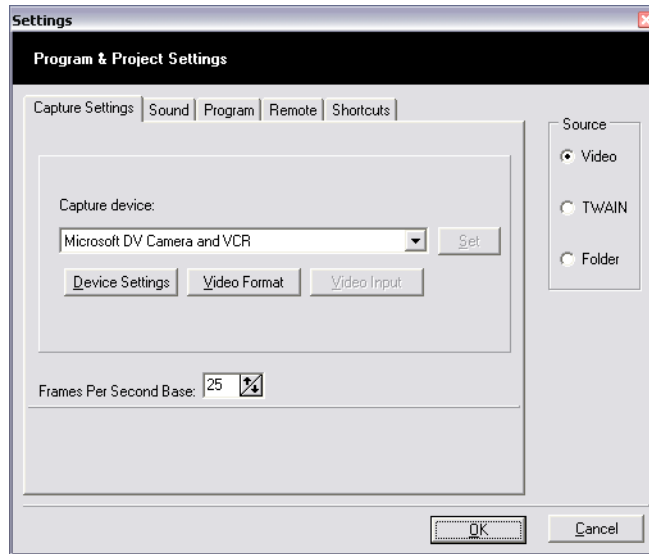
OK – pressed activates changed settings

Cancel – closes 'Settings' window and restores previous values.

#### 2.3.8.1 Capture Settings (input device settings)

**Frames Per Second Base** – for all sources - defines the base number of frames per second for the given device. This is informational type of a setting – it has no influence over the devices functions – it will switch the entire project to this value. Changing this parameter is not recommended – especially if the project is not empty. The value can change the division into frames in the 'Audioscope' Mode and the default FPS value in the 'RAM Player' and "AVI Export" window.

### 2.3.8.1.1 Video source



**Capture Device** - the selection of the video capturing device.

**Device Settings** - displays the settings screen typical for the given device (e.g. PAL, NTSC, Secam and/or Brightness, Contrast, Saturation etc.)

**Video Format** - displays the image format settings screen typical for the given device (e.g. RGB24, 640x480)

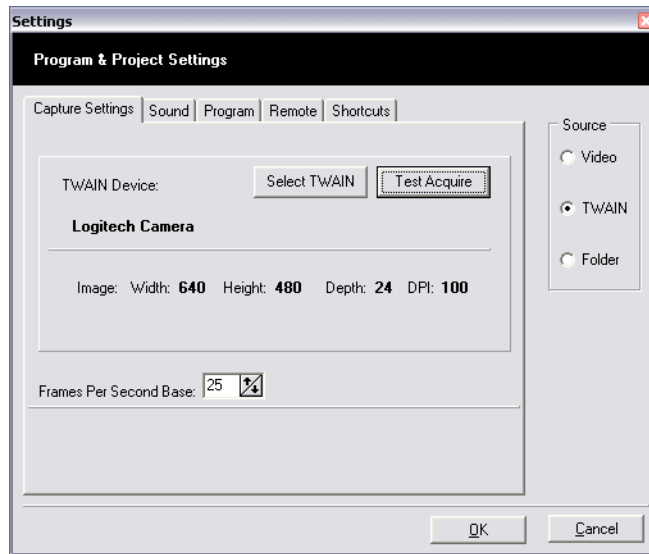
**Video Input** - displays the video input settings screen typical for the given device (e.g. composite or S-Video)

**Set** - activates the selected device. This button is grayed (not active) if the device is already previewing.



For not active device, settings buttons – Device Settings, Video Format and Video Input - are grayed (not active) also.

### 2.3.8.1.2 TWAIN source



**TWAIN Device** - the selection of the TWAIN device.

**Select TWAIN** - displays the selection window with TWAIN devices list.

**Test Acquire** – it is very important step to determine information about acquired picture. System automatically sets the image size. You can't set TWAIN as source without test it first. Picture will be acquired to the Preview Window.

**Image** – displays width, height, pixel depth and resolution of the acquired image.



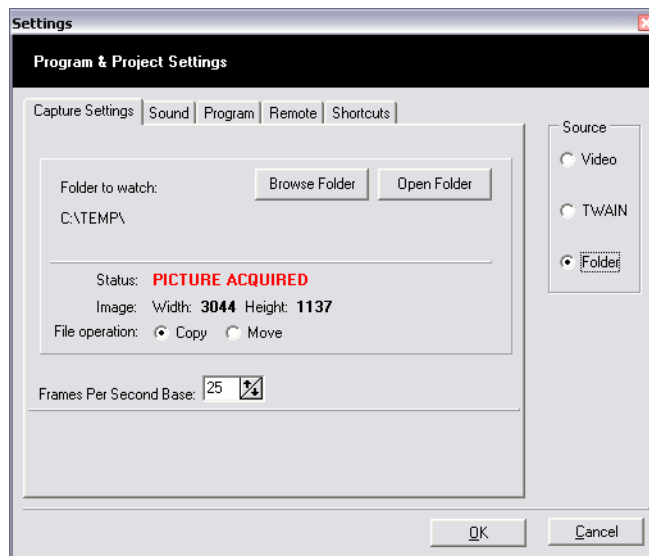
*To use TWAIN source, width and height must be greater than zero. If pixel depth is less than 8, acquired image is automatically converter to pixel depth 8.*

To determine TWAIN as a source is necessary to perform following steps:

1. Select TWAIN source by pressing "Select TWAIN" button.
2. Press "Test Acquire" to perform test for settings in TWAIN source. This opens TWAIN source window (e.g. scanner or digital camera)
3. Setup TWAIN device – scan region, resolution, color scale for scanner or image for camera
4. In TWAIN device window grab an image.
5. Image caption should consists current size, pixel depth and dots per inch information.
6. Press OK to finish setup.



### 2.3.8.1.3 Folder source (Digital Still Camera support)



This source works as a “watchdog” folder (folder monitor). If in selected folder appears a file and AnimatorDV recognizes it as a valid bitmap (bmp, tga, tif, jpg), picture automatically will be acquired to preview window and optionally will be added to the active sequence (see chapter 1.2.2).

For set a folder as an image source it is important to determine the image size by copying wanted image into the watched folder or shoot the picture in Digital Still Camera connected as storage.

**Browse Folders** - the selection of the folder to watch (in the system space – on disk drives or as external storage device e.g. Digital Still Camera)

**Open Folder** - displays folder, which is set to watch (this is just a help button)

**Folder to watch** – displays path to the folder which is set to watch

**Status** – displays current folder mode status:

*‘Waiting for a file’ – it means no picture appears in watched folder*

*‘Picture acquired’ – it means the picture was acquired and accepted. Once accepted picture determines size of the rest images for the sequence. If at grabbing, a new picture in watched folder has a different size, AnimatorDV will display warning message*

**Image** – displays width and height of the acquired image.

**File operation** – two options:

*‘Copy’ – copy acquired image from watched folder to the sequence folder*

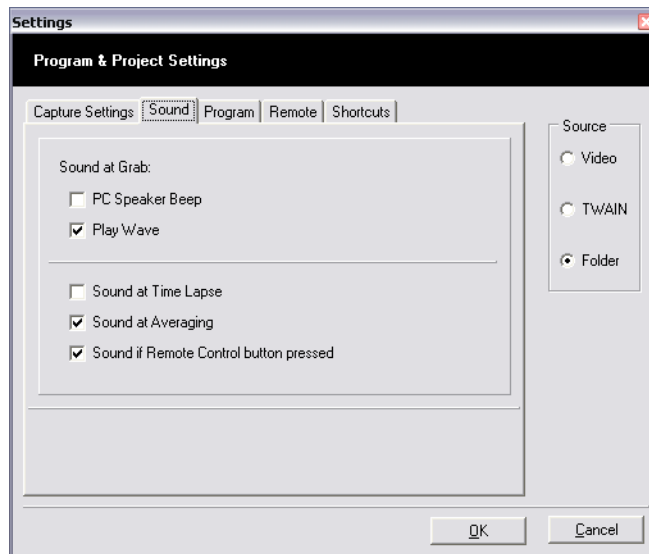
*‘Move’ – copy acquired image from watched folder to the sequence folder and delete from the watched folder*

To determine Folder as a source is necessary to perform following steps:

1. Browse folder where pictures will appear.
2. Open the folder by clicking “Open Folder” button. Copy into opened folder wanted image. It should to determine resolution and switch folder mode to “Picture Acquired”
3. Press OK to finish setup.

### 2.3.8.2 Sound

Sound settings during digitalization.



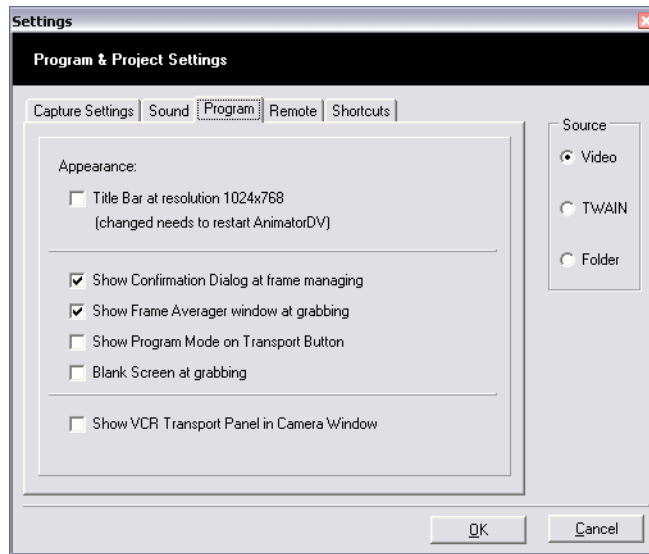
**PC Speaker Beep** - turns the PC speaker sounds on/off.

**Play Wave** - turns wave sounds on/off.

**Sound at Time Lapse** - sets the sounds for digitalization when the Time Lapse function is turned on (the setting works when at least one of the above mentioned options is on).

**Sound if Remote Control button pressed** – turns on/off sound if the button in remote control hardware is pressed

### 2.3.8.3 Program



**Title Bar at resolution 1024x768** – turns the program title bar on/off. The title bar is off in the default setting in order to save the screen area for the program windows. After any change of this setting AnimatorDV system must be restarted.

**Show Confirmation Dialog at frame managing** – checked turns on showing confirmation dialog for frame editing function: inserting, deleting, replacing, duplicating. Turned off does editing immediately without confirmation.

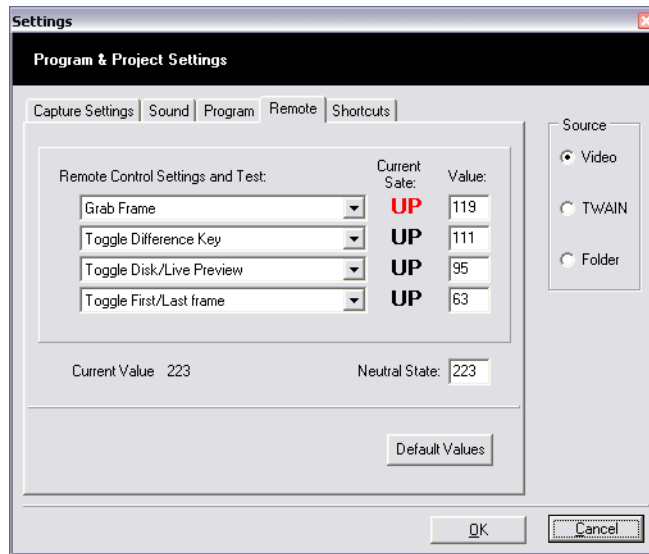
**Show Frame Averager window at grabbing** – checked turns on auto showing the 'Frame Average' tool window to presentation current progress of averaging procedure. Unchecked does averaging procedure without displaying the window.

**Show Program Mode on Transport button** – turned on displays current program mode on transport button (as caption) in the control panel of the 'Mix window'. The Program Modes are described in the chapter 1.1.2.

**Blank screen at grabbing** – turned on displays black filled box at grabbing. It can be useful for preventing from unwanted lighting from PC screen.

**Show VCR Transport panel in Camera Window** – turns on/off displaying VCR transport (play, stop etc.) buttons in Camera window,

## 2.3.8.4 Remote



Settings assign individual function of AnimatorDV to remote controller buttons. Assignment depends on choice of the appropriate function from the list. In this window is also possible to test the remote control hardware. Pressing a button causes change the message “UP” to “DOWN”.

List of the function can be assigned (Remote Control Settings):

- Grab Frame
- Toggle Difference Key
- Toggle Disk/Live Preview
- Toggle First/Last frame
- Toggle Sequence/Rotoscope mode
- Toggle Onion Skin (1, 2, 3, 4, 5, Custom)
- Previous Frame
- Next Frame
- RAM Player
- Play Loop
- Play
- Grab Multiple Frame Opt 1 (without dialog box)
- Grab Multiple Frame Opt 2 (without dialog box)
- Grab Multiple Frame Opt 3 (without dialog box)
- Grab Multiple Frame Opt 4 (without dialog box)
- Get DSC/TWAIN Preview

**Current State** – shows which button is currently pressed.

**Value** – decimal value of port (LPT) state for button – here defaults. You can to define custom values for buttons.

**Current Value** - shows currently port value – it is helpful for define custom values.

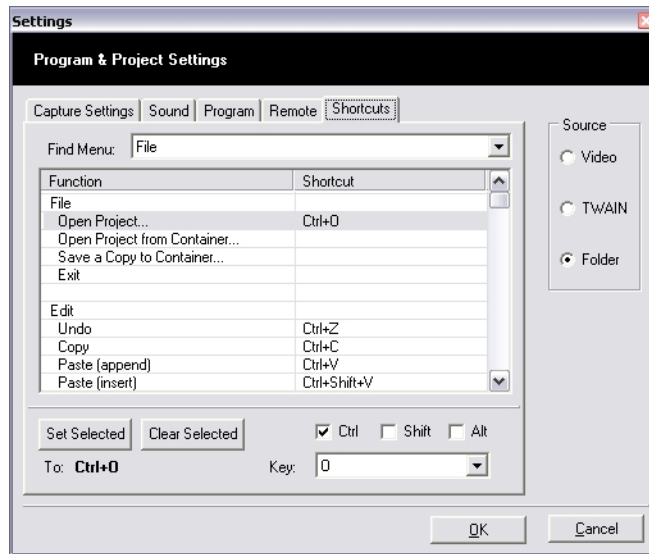
**Neutral State** – value for port state if no button is pressed.

**Default Values** – button – restores default values for Remote Controller settings.

Example for define custom port values:

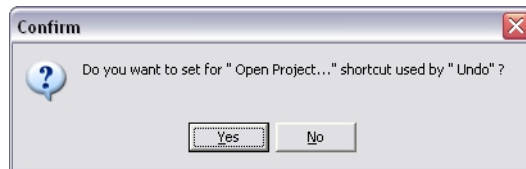
1. Set the ‘Neutral State’ – release all buttons and type out value from ‘Current State’ field.
2. Press first (red) button in Remote Controller (if supplied) and type out value from ‘Current Value’ field.
3. Repeat step 2 for all buttons.
4. Press ‘OK’ for store values.

### 2.3.8.5 Shortcuts



Here you can to define own shortcuts for all menu and program function. 'Find Menu' drop down list includes main menu names. You can quickly go over to selected menu functions. To define shortcut select proper function from the list and press combination of the keys you want to define.

Defined key combination (shortcut) is displayed at 'To:' caption in the lower part. To set a new shortcut - press 'Set selected' button. If the shortcut is already defined confirmation message will appear e.g.:



If you want to clear a shortcut for selected function just press the 'Clear Selected' button.

Each shortcut you can to define or modify in other way - by choosing key from drop down list at caption 'Key:' and/or check/uncheck 'Ctrl', 'Shift' or 'Alt' option.

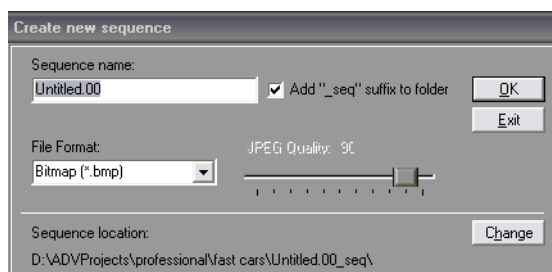
### 2.3.9 Reset Capture Device [Ctrl+D]

Refreshes the video capture device. Useful e.g. when the camera was accidentally switched on or when switching from VCR to camera mode.

## 2.4 Sequences

### 2.4.1 New Sequence [Ctrl+N]

Opens the new sequence window.



#### New sequence window

**Sequence Name** - name of the directory containing the sequence and the prefix for name of the sequence files.

**Add "\_seq" suffix to folder** - each sequence is created in a new folder. Folder has a name which was given in 'Sequence name'. This option allows adding a "\_seq" suffix to the name of the folder.

**File Format** - the choice of graphical format in which the sequence files will be recorded. Available formats:

\*.**bmp** – windows bitmap (no compression) default and recommended.

\*.**tga** – Targa (no compression)

\*.**tif** – TIFF bitmap (no compression)

\*.**jpg** – JPEG (compressed). After choosing this format 'JPEG Quality' field is being activated, set to 90 as default. The number 90 defines compression quality ranging from 0 to 100. The best quality of digitalized images we get using the 100 value.

It is recommended to use no compression formats (bmp, tga or tif).

**Sequence location** - defines place on disk – a folder, where sequence files are to be saved.

**Change** - if the above mention information about placement of files is incorrect than new folder can be defined. Pushing this button opens the dialog window, in which new place for the sequence should be indicated.

**OK** - applies the data and creates a new sequence.

**Exit** - hides the new sequence window without making any changes.



*Even though it is acceptable, it is recommended not to give sequence names ending with a digit. When importing the filename is created on the basis of numerical values e.g.*

Sequence name	filename	filename interpretation	file number
spacer	spacer00001.bmp	spacer	1
spacer2	spacer200001.bmp	spacer	200001

### **2.4.2 Import Sequence**

Imports the sequence of files from a different project or created in a different program. Option available for the following file formats: Targa (\*.tga), Bitmap (\*.bmp), TIFF(\*.tif), JPEG (\*.jpg). In order for the sequence to be prepared correctly it must have it's own folder, meaning it's files should be located in one folder. The folder should not contain more than one sequence. The image size of the imported sequence should be the same as the project image size. The import is based on analyzing the sequence file chosen during importing (not necessarily the first one). The import mode checks the file prefix number of digits and the extension.

Example of a correct sequence:

```
spacer00001.bmp  
spacer00002.bmp  
spacer00003.bmp  
spacer00004.bmp
```

Choosing one of the above mentioned sequence components will cause importing all the files of the same prefix, which are to be found in the folder.

If the chosen folder doesn't not contain any sequence AnimatorDV will import all the files of the same extension as the chosen file.

### **2.4.3 Lock All**

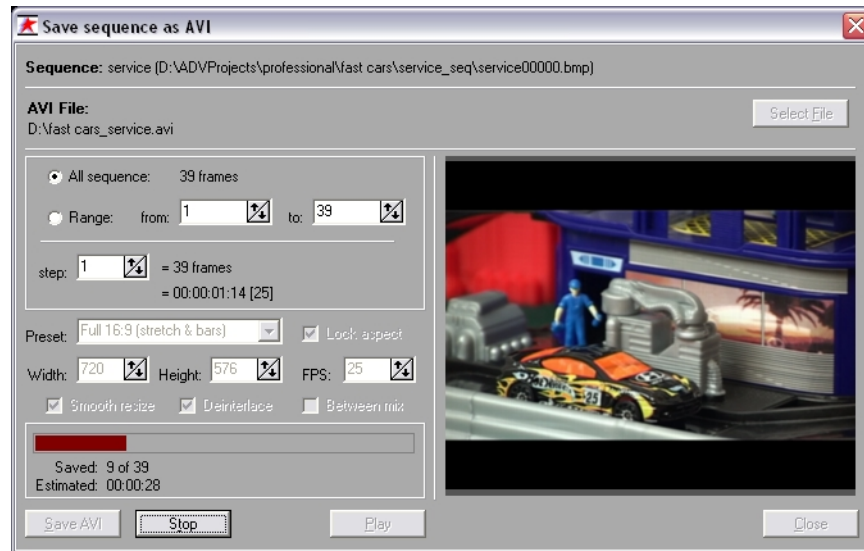
Secures the sequences included in the project from edition.

### **2.4.4 Unlock All**

Takes the security lock off all the sequences included within the project. The sequence with a lock taken off can be activated to be edited and digitalized and it can be removed or it's name can be changed.

## 2.4.5 Make AVI

Displays the sequence export window as the AVI file.



### AVI export window

**Sequence** - name of the sequence and the full path to the sequence.

**AVI File** - name of the AVI file, which will be created.

**Select File** - displays the dialog window, which defines the AVI filename.

**All sequence** – exports all the sequence.

**Range** - exports the chosen and defined in the ‘from’ ‘to’ fields range from a sequence.

**Step** - defines the step every which the sequence files will be collected to export. The default value of 1 means that every file of the sequence will be exported and e.g. 2 means that every second, 3, every third file etc. The final sequence duration gives the value after the “=” sign and the ‘Step’ field. This option may be useful in “shortening” the sequence that was created through ‘Time Lapse’ if excessively small digitalization interval is set.



*Setting a negative value for the ‘Step’ field will cause the sequence files to be collected backwards, from the last one to the first one. As the result an AVI file playing the sequence backwards will be created.*

**Preset** - combination of settings useful for exporting:

**Full** - sets the same size for the export as there is for the sequence e.g. 720x576

**Half** - exports half the size of a sequence e.g. 360x288

**Quarter** - exports quarter the size of a sequence e.g. 180x144

**Custom** - exports user defined size

**Full 16:9 (stretch)** - exports sequence in full size forcing the 16:9 proportion by squeezing vertically

**Full 16:9 (stretch & bars)** - exports the sequence in full size, squeezing vertically to 16:9 proportion as well as adding black bars on the top and in the bottom of the screen. The outcome is a standard TV screen (4:3) with bars

**Half 16:9 (stretch)** - exports in 1/2 of the sequence size, squeezing the image vertically to the 16:9 proportion

**Half 16:9 (stretch & bars)** - exports 1/2 the size of a sequence, squeezing the image vertically to the 16:9 proportion with bars to 4:3

**Quarter 16:9 (stretch)** - exports in 1/4 of the sequence size, squeezing the image vertically to 16:9 proportion



**Quarter 16:9 (stretch & bars)** - exports in 1/4 of the sequence size, squeezing the image vertically to 16:9 proportion with bars to 4:3

**Width** - the area to define the width of the exported image.

**Height** - the area to define the height of the exported image.

**FPS** - the area to define the number of frames displayed per second for the exported AVI file.

**Smooth resize** - if turned on – it causes increase of quality for the minimized image. In order to gain the best quality of the minimized image, it is recommended to turn this option on (e.g. Full 16:9). However because it makes the exports little slower, it isn't necessary for preview.

**Deinterlace** – when turned on it enables a filter, which eliminates the interlace flickering of even and odd lines.

**Between Mix** – when turned on it generates additional frames between existing, e.g. normal sequence is – A B C D E F G ... with selected Between Mix – A AB B BC C CD D DE E EF F FG G. AB, BC, CD etc. there are mixed frames (with fixed 50% transparency level).

**Lock aspect** - when “on” – causes preservation of the image proportion when changing width or height.

**Export progress bar** - shows the export progress in a graphical form.

**Saved** - defines the number of a frame exported from the sequence.

**Estimated** - Gives the estimated time to completion of the export.

**Save Avi** - the AVI sequence save button. Active once the name of the file is defined (“Select File”). After clicking ‘Save AVI’, the compression format choice dialog window will be displayed. The codecs installed within the Windows system are available here.



*Because the export module uses the system-program codecs, the export process probably will be longer than when similar hardware codecs were used, even of the same company.*

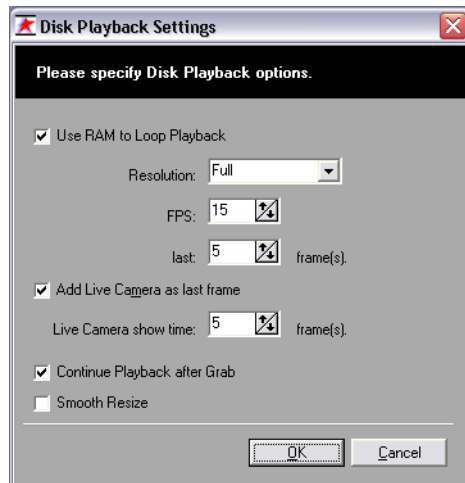
**Stop** - causes the standstill of the export process. There will be an AVI file partially created on the disk. In order to export the file again one must push the ‘Select File’ button and indicate the same or a new file. The repeated export will replace the old file with the new one.

**Play** - opens the Windows Media Player window with the newly created AVI file.

**Close** - closes the export mode.

## 2.4.6 Disk Playback Settings [Ctrl+P]

Opens the display from disk setup window. Disk player allows the direct display of the previously recorded frames. The recording speed is dependant on the computer configuration (the ability of disk and processor). However, if option “Use RAM to Loop Playback” is checked, defined (“last: nn frame(s).”) amount of frames is buffered into RAM. The setup relates only to the ‘Loop Play’ navigation button.



Right-click on “Loop Play” button in ‘Mix Window’ opens this settings window also.

Display from disk setup window

**Use RAM to Loop Playback** - when turned “on”, frames of the sequence are buffered into RAM.

**Resolution** – sets resolution of buffered frames. Available options – Full, Half, Quarter. Half and Quarter degrades resolution of buffered images. Recommended setup is Full.

**FPS** - sets frames per second speed for playback. Changed doesn’t affect main Frame Per Second Base for current project.

**Last** – defines amount of last frames of the sequence to buffering.

**Add live camera as last frame** - when checked, during the looped playback, live camera image will be included after the last frame in the buffered sequence.

**Live Camera show time** – defines time in frames for Live Camera image display.

**Continue playback after Grab** – when checked, Loop Playback doesn’t break after grabbing picture to the sequence.

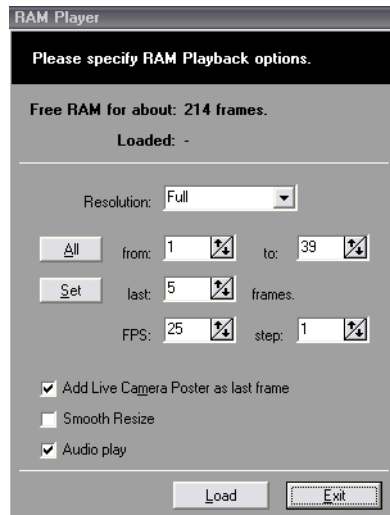
**Smooth Resize** – works with Resolution option. Checked produces smoother picture in RAM buffer for playback.

**OK** - hides the window and saves changes.

**Cancel** - hides the window ignoring changes.

## 2.4.7 RAM Player [Ctrl+L]

Opens the Ram Player window. Unlike the Disk Player, RAM player is designed to play sequences in real time from the computer memory, without the need of exporting it as an AVI file.



RAM player setup window

**Free RAM for about** - defines, on the basis of free RAM, the approximate free space for frames.

**Loaded** - displays the actual number of frames loaded into the ram memory.

**Resolution** - defines the resolution in which the sequence frames will be read. The smaller the frames, the more can be loaded to RAM.

**Full** - frames will be read with the same resolution as they are saved on disk.

**Half** - frames will be decreased to 1/2 of their size.

**Quarter** - frames will be decreased to 1/4 of their size

**'from', 'to'** - defines the range of frames in the sequence, which will be loaded.

**All** - put the whole sequence range in the 'from' and 'to' fields ('from' – 1, 'to' – number of the last sequence frame.)

**Set** - sets the display the number of last frames given in the 'last' field, e.g. if the sequence includes 30 frames and the 'last' field has the value of 5 in it, then after pressing the 'set' button the 'from' field will be set to 25, and the 'to' field will be set to 30.

**FPS** - defines the number of frames displayed per second.

**Step** - defines the step, every which the files will be taken from the sequence. The default value of 1 means that every file of the sequence will be uploaded to RAM and e.g. 2 means that every second, 3 every third file etc.

**Add Live Camera Poster as last frame** - when 'on' during the looped sequence display, static image from the camera, recorded just before entering the RAM player window, will be added after the last frame of the sequence (marked in the 'to' field).

**Smooth Resize** - improves the decreased image quality at the cost of the upload efficiency.

**Audio Play** – synchronizes playing a RAM sequence with audio file in Audioscope module

**Load** - saves the setup, uploads and displays the sequence.

**Exit** - hides the RAM player window.

**Stop** – (appears instead of 'Exit' after 'Load' has been pushed) – stops the upload/display



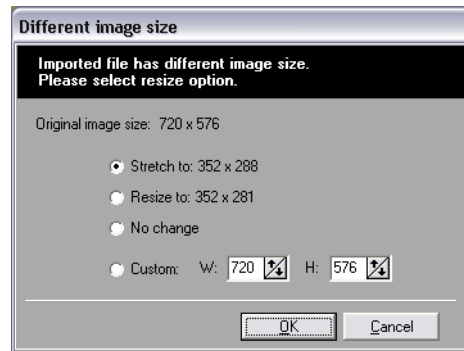
During playing the sequence from RAM, transport buttons in 'Mix Window' are active.

## 2.5 Backgrounds

### 2.5.1 Import Background [Ctrl+B]

Imports the background, which can be any graphical file. Accepted formats: Targa \*.tga, Bitmap \*.bmp, TIFF \*.tif, JPEG \*.jpg.

If the background size is different then the size of the project, AnimatorDV will display a dialog window asking if the file should be rescaled to the size of the project.



Rescale choice window

Three options are available:

- **Stretch** - the background will be stretched to the project size
- **Resize** - the background will be adjusted to the project size but the proportions will be saved
- **No changes** - the background will be imported in it's original size
- **Custom** - the background will be imported in defined custom size

## 2.6 Rotoscopes

### 2.6.1 Import Rotoscope [Ctrl+R]

Imports video clip (AVI), which will be used as a basis for animation then created. In order to import a file one must first activate the sequence, for which the clip is meant. Each sequence can have it's own rotoscope file.

In order to change the imported rotoscope file, one must remove it and import another one into it's place.

#### Removing the rotoscope file

1. In order to remove the rotoscope file one must open the 'Rotoscopes' tab in the 'Project' window, then chose the file to be deleted.
2. Pressing the right mouse button on the name of the file will cause the display of the context menu.
3. From the menu one must choose the 'Remove' function. The file will be removed from the project.

## 2.6.2 Set Sync Point

This function is designed in order to define the rotoscope and sequence synchronization point. It is available only for an active rotoscope file (▶- is the symbol of an active rotoscope). After choosing the ‘Set Sync Point’ AnimatorDV switches to the Roto-Sync mode (RS). In the ‘Mix Window’ rotoscope file edition panel appears.



‘Mix Window’ with the Roto-Sync setup panel

**Go Sync** - pressing this button will effect in switching the preview to the frame with the synchronization point. In this frame, up in the middle a white rectangle will appear. It is a sign that the preview is in the synchronization point.

**Set Sync** - is designed to mark the current preview frame as a synchronization point

**Step** - defines the value of display for further preview frames. 1 means that the after digitalization of the camera frame into a sequence, the rotoscope clip will go to the next frame. Value of 2 means that it will display every second frame, 3 – every third etc.

**Exit Sync** - ends the rotoscope synchronization point edition.



**The white rectangle** in the lower-left corner means, that it is **the first** frame of the rotoscope file. **The red bar**, which may appear during digitalization near the right edge of the preview window means, that it is **the last** frame of the rotoscope file.

## 2.7 Markers

### 2.7.1 New Marker [Ctrl+M]

Turns the marker setup mode 'on'. The markers are set up by clicking within the preview area in the 'Mix' window (graph. 2-7-1). In this area, the mouse cursor changes its shape into a little cross. To make it easier one may turn the 'Zoom' window from the 'Window' menu.



Graph 2-7-1 'mix' window with the maker setup panel

*Size* - defines the marker size (1-4000)

*Color* - defines the color of the marker

*X Pos, Y Pos* - display the current cursor position

*Exit Markers* - turns the marker setup mode 'off'

### 2.7.2 Import Markers

Uploads previously saved markers from disk to the project. All the markers created before the import are removed.

### 2.7.3 Append Markers

Uploads previously saved markers from disk to the project. The markers are added to the existing markers.

### 2.7.4 Export All Markers

Saves all the project's markers on disk.

### 2.7.5 Export Visible Markers

Saves on disk only those markers, which are currently visible. The visibility can be controlled by placing the checked () field in the 'Project' window's 'Markers' tab.

### 2.7.6 Generate 'Title Safe' Markers

Inserts two markers, defining safe line of visibility on a TV screen, into the project. The most important elements of the scene should be placed within this area.

### 2.7.7 Show Markers [M]

Shows or hides all the markers set as 'visible'. This function has no influence over 'invisible' markers.

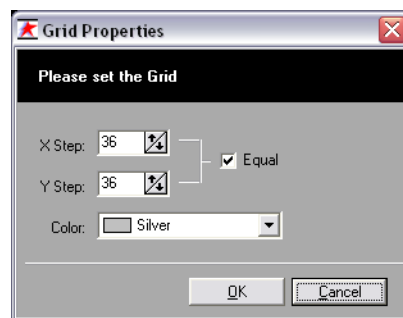


*It is possible to move marker or group of markers by direct click on it and drag to a new position. To select more than one marker you should hold Ctrl key during dragging. You can select also multiple markers in the Project window. Right Mouse Button Click on the marker shows context menu with 'Set Marker Properties' function.*

### 2.7.8 Show Grid [G]

Shows or hides grid. Grid is proportional to the preview and resizes with it.

### 2.7.9 Grid Settings [Ctrl+G]



**Grid properties window**

**X Step** – defines the width of the grid in pixels

**Y Step** – defines the height of the grid in pixels

**Color** – defines the color of the grid

**Equal** – checked causes proportional X Step and Y Step size changes.



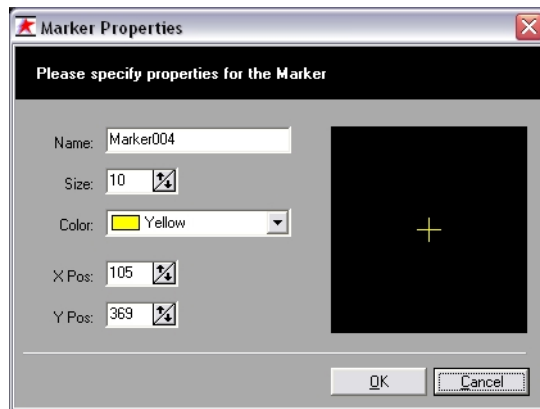
*Grid is visible on stored frames only – to see the grid you should to activate a sequence first. You can set opacity of the grid by changing mix between stored and live image. If mix is set to 100% live you can't see the grid.*

### 2.7.10 Bold Markers and Grid

Bolds Markers and Grid. This is very helpful in high resolutions.

### 2.7.11 Set Marker Properties

Displays the marker properties window. This function is available in the marker context menu (see chapter 1.3). Allows precise setup for a given marker.



Graph 2-7-2 set marker properties window

**Name** – name for the marker (set automatically or defined by user)

**Size** – defines the size of the marker (1-800)

**Color** – defines the color of the marker

**X Pos, Y Pos** – display the current cursor position

**OK** – saves the changes and hides the window

**Cancel** – ignores the changes and hides the window

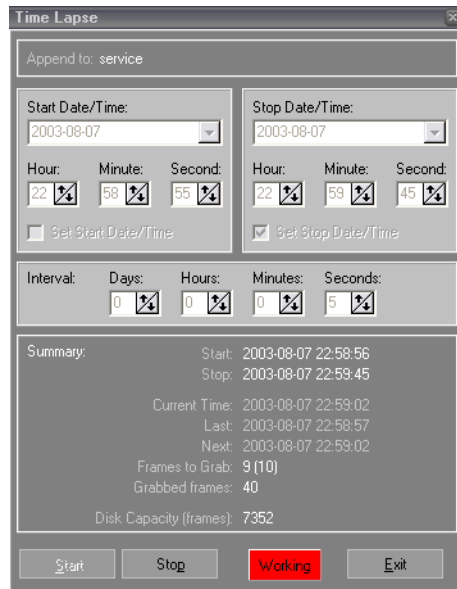
The preview for the edited marker is in the black area. The changes also appear in the Mix Window.



## 2.8 Tools

### 2.8.1 Time Lapse

This function is designed to automatically take pictures in time. Time Lapse can be used after activation of any given sequence. If the project doesn't include any sequence or the project includes inactive sequences AnimatorDV will ask if it should create a new sequence.



Graph 2-8-1 Time Lapse Window

**Append to** - name of the sequence to which the frames will be added to.

**Start Date/Time** - this field defines the time, in which the function of taking pictures automatically will be activated.

**Set Start Date/Time** - when checked it activates the auto activation function.

**Stop Date/Time** - this field defines the time, in which the function of taking pictures automatically will be stopped.

**Set Stop Date/Time** - when checked it activates the auto stop function.

**Interval** - it is designed to define the gap between consecutive pictures.

**Summary** - this field includes information about the work and setup of Time Lapse

**Start** - displays the beginning time for Time Lapse – ‘Instantly’ means that taking pictures will begin immediately after pressing the ‘Start’ button located below. The time displayed in red means that the chosen beginning time is invalid – set before current time.

**Stop** - displays the end time for Time Lapse – ‘Constantly’ means that taking pictures will end just after pressing the ‘Stop’ button located below. The time displayed in red means that the chosen end time is invalid – set before current time.

**Current time** - displays the current time.

**Last** - displays the time when the last picture was taken.

**Next** - displays the time when the next picture will be taken.

**Frames to grab** - if the end time is set is displays how many pictures still is to be taken.

**Grabbed frames** - displays the number of pictures taken.

**Disk Capacity (frames)** - displays the number of pictures, which can be taken. The value is estimated on the basis of free disk space of the disk where the pictures are digitalized.

**Ready/Off Line/Standby/Working** - current Time Lapse status

Buttons:

**Start** - initiates Time Lapse

**Stop** - stops Time Lapse

**Exit** - hides Time Lapse window

### 2.8.2 Project History

Displays the window which includes the history of the most important actions done by the user:

- creation / display of the project
- exiting the project
- digitalization of a frame
- creating a sequence (description of the file type and name)
- operations done to sequences (erasing, duplicating, insertion, changing frames)
- Time Lapse – start, stop, interval



If you want to print the project history, click in the middle of the 'Project History' window, press Ctrl+A for select all the text, copy it to clipboard by Ctrl+C and paste in any text editor e.g. Notepad or WordPad. Project history is stored in the project folder in a file with an extension \*.rtf

## 2.9 Window

### 2.9.1 Workspace

It is designed to maintain the setup of program windows.



*The program windows setup is saved when exiting the program, without the need to save it.*

#### 2.9.1.1 Notebook

Default setting. It arranges windows in optimal sizes and positions to work on a notebook computer. This setting cannot be removed

#### 2.9.1.2 Save As

Saves the current arrangement of windows under the name given by the user.

#### 2.9.1.3 Delete

Displays a dialog window with a list of saved settings. It deletes a chosen setting.

### 2.9.2 Minimize

Minimizes the AnimatorDV window. The function appears when the resolution of the computer screen is 1024x768 and application has not the title bar. Title bar can be turned on in project settings window (see chapter 2.3.7.3).

### 2.9.3 Project [Ctrl+1]

Hides/Displays the project window.

### 2.9.4 Mix [Ctrl+2]

Hides/Displays the mix preview window.

### 2.9.5 Camera Preview [Ctrl+3]

Hides/Displays the camera preview window.

### **2.9.6 Grabber info [Ctrl+4]**

Hides/Displays the sequence digitalization information window.

### **2.9.7 Audioscope [A]**

Hides/Displays the ‘Audioscope’ tool window. Please refer chapter 1.5 for details.

### **2.9.8 Xsheet [X]**

Hides/Displays the ‘AnimatorDV X-Sheet’ tool window. Please refer chapter 1.10 for details.

### **2.9.9 Onion Skin Blend Settings [O]**

Hides/Displays the ‘Onion Skin Blend Settings’ tool window. Please refer chapter 1.6 for details.

### **2.9.10 Chroma Key [C]**

Hides/Displays the ‘Chroma Key’ tool window. Please refer chapter 1.7 for details.

### **2.9.11 Zoom [Z]**

Hides/Displays the ‘Zoom’ tool window. Here the enlarged image from the ‘Mix Window’ appears. A little cross in the center of ‘Zoom’ window represents the current position of mouse cursor. This function may show useful e.g. in precise marker positioning.

**Zoom factor** – zoom extent (2-30).

Please refer chapter 1.8 for details.

### **2.9.12 Frame Average**

Hides/Displays the quality improvement tool window (the settings are stored for each project separately). Please refer chapter 1.9 for details.

### **2.9.13 Mix Window Console [Ctrl+9]**

Hides/Displays the console in the lower part of mix preview window.

### **2.9.14 Set window to Default Size [Ctrl+0]**

Adopts window size to the resolution of the digitalized image.

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