

FDCapture

Capturing Video and Audio Data



Revision as of November 09, 2006.

User's Guide



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Increase the separation between the equipment and receiver.

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Introduction

The FDCapture application is intended to capture video and audio data using an FD300 board. The result of the process is an AVI file or several AVI files.

There are three data input modes supported by this application:

- Standard capture mode;
- Timetable capture mode;
- VTR capture mode.

It is possible to capture data either with or without audio in each of the modes. The application settings are saved in the registry. A built-in language support of the interface is available. The producers support the Russian and English languages.

Application Main Window

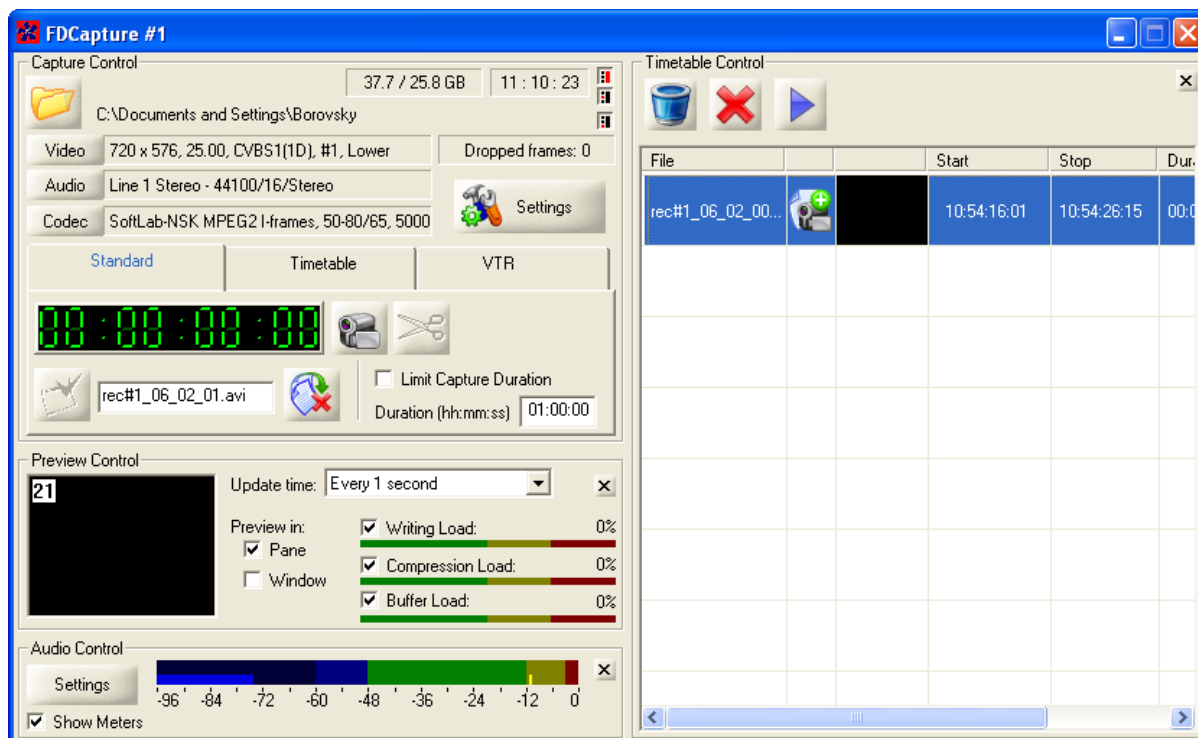



Figure 1. The application main window

There are four independent panes in the FDCapture application main window (Figure 1):

- The Capture Control pane is used to control data input, to select a data input mode, to provide information of current settings and additional information, to control the state of other panes. The pane is always displayed.
- The Preview Control pane is used to control the previewing of the data being captured. The panel can be displayed or hidden during data input.
- The Audio Control pane displays volume and the settings of the audio device parameters. The pane can be displayed or hidden only before the start or after the completion of the capturing procedure. The absence of the panel in the application main window means that the data is being captured without audio.
- The Timetable Control pane is intended to display the input results, timetable and to work with files containing timetables. The pane can be displayed or hidden during data input.



The block of buttons  is intended to display/hide the Capture Control, Preview Control, and Audio Control panes (there are some specificities when working with audio at data input, see [Audio Control Pane](#)).



The Video, Audio, and Codec buttons open the Program settings dialog ([Figure 3](#)) with the respective panels for the video, audio and codec settings.

The appearance of the control elements changes depending on the application current state (data input or periods between data input). All the controls and panes are described in more detail below.

Capture Control Pane

The options of the Capture Control pane of the application main window ([Figure 2](#)) are used to control data input, select a capturing mode, display information about the current settings and additional information, and to control the state of the other panes (displayed/hidden). This pane is always displayed.

The **Dropped frames: 0** field displays information of dropped frames. When starting data input or clicking on the text field, the number of dropped frames is reset. The Standard, Timetable, and VTR tabs are used to select a data capture mode. The modes will be described below.

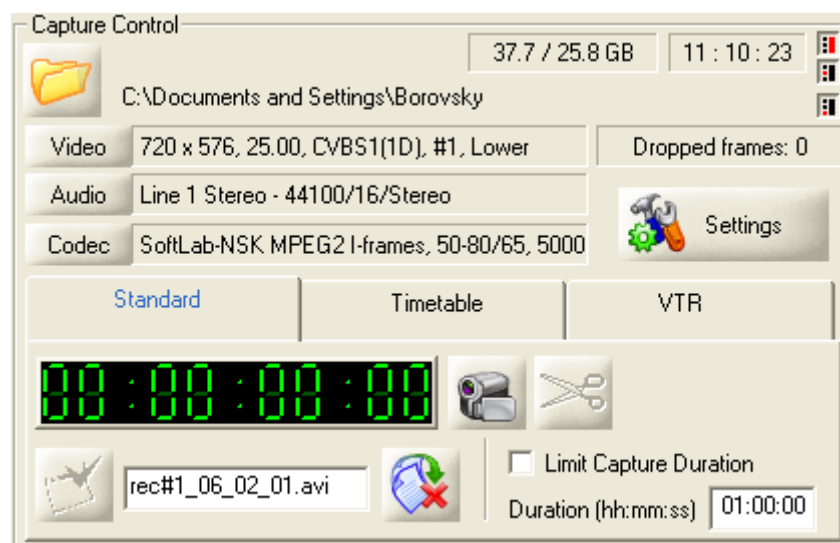
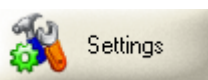


Figure 2. The Capture Control pane

Pressing the  **Settings** button opens the Program Settings dialog ([Figure 3](#)).

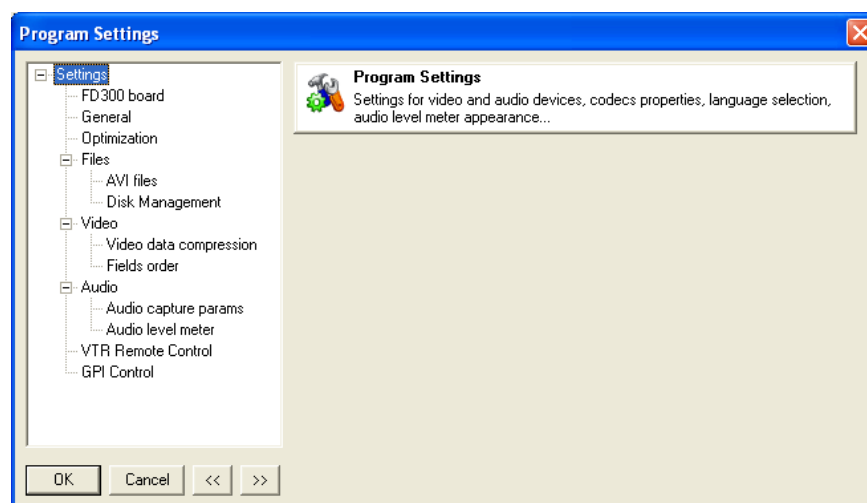


Figure 3. The Program Settings dialog

The dialog contains information about all available settings. A

left click on a selected item in the object tree on the left opens the required settings panel. All the panels are described below.

1. Selecting a Folder



The Set working folder button opens the Disk Management panel of the Program Settings dialog (Figure 4).

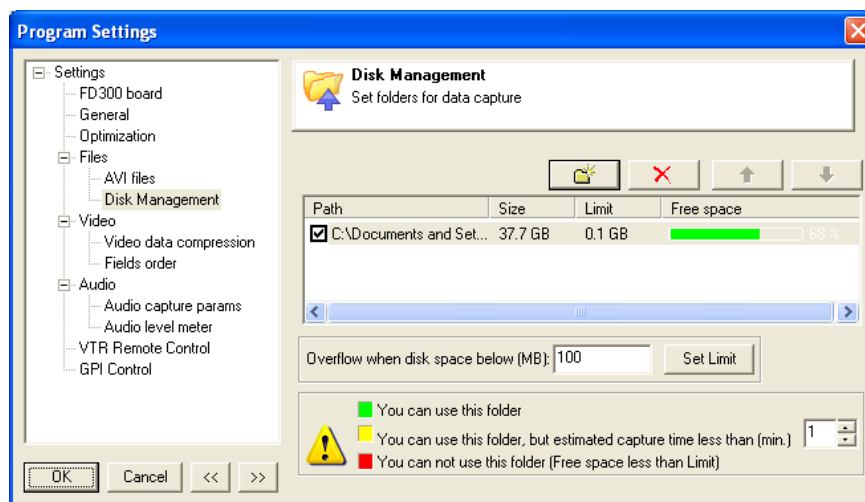


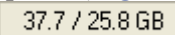
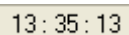


Figure 4. The Disk Management panel

The dialog is used to select a folder for saving the captured data and adjust its settings. Pressing the Add folder  button opens the Set Folder dialog for selecting a folder. Pressing the Remove folder  button deletes the selected folder from the list. The buttons with upward/downward pointing arrows allow you to move the selected folder in the list upward/downward. The Free space column of the folders list is used to display the free disk space (in percentage terms) and the disk availability. Pressing the Set Limit button changes the string color according to the information in the bottom part of the dialog. Green color allows you to use the folder. Yellow color allows you using the folder with limitations for the data input time; it is specified opposite to the restriction line. Red color disables the folder for saving the captured data if the empty disk space is less than the limit.

The limit value for the amount of captured data in each folder on the disk is set below the folders list, in the Overflow when disk space below (MB) field.

After the current folder is selected, its name is displayed on the Capture Control pane (Figure 2) on the right of the Set working folder button. The  field displays information of the used/free space on the disk where the current folder is located. The current time is displayed in the  field.

2. Video Parameters Settings

Pressing the **Video** button opens a panel with the settings of the FD300 board ([Figure 5](#)).

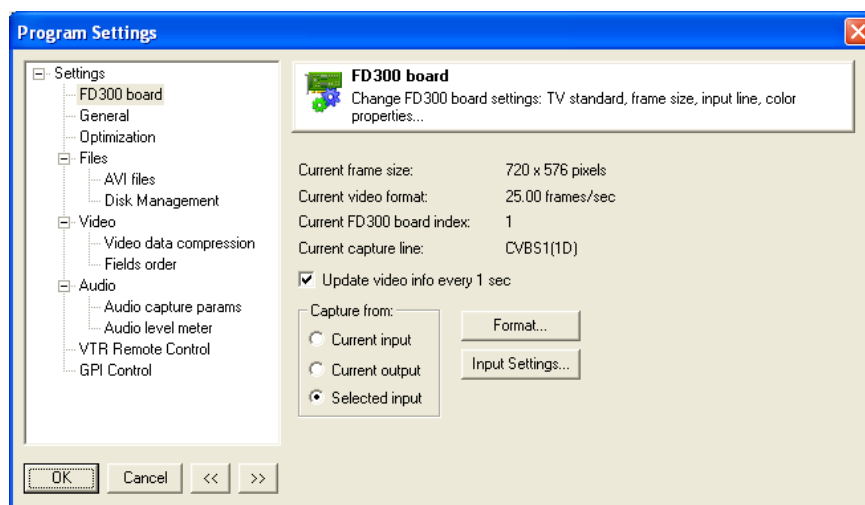


Figure 5. The FD300 board settings

The dialog displays information about the Current frame size, Current video format, Current FD300 board index and Current capture line.

The application settings allow you to select whether data will be captured from the Current input, Current output, or Selected input (set beforehand).

The Update video info every 1 sec option provides updating information about the FD300 board settings in the application main window every second.

When capturing from the selected input, the Input Settings... button becomes available; pressing the button opens the FDTM Board Properties/Input dialog ([Figure 6](#)) for adjusting the video input settings.

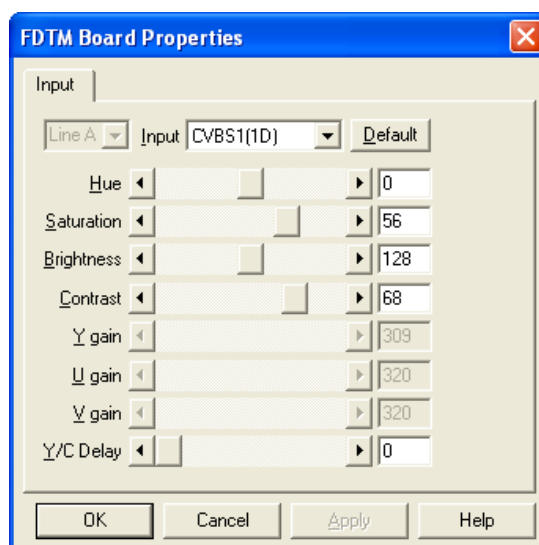


Figure 6. The input settings in the FDTM Board Properties/Input dialog

After all the parameters are adjusted, the OK button closes the dialog with the saved settings. In that case, at the application start-up, the settings will always be loaded into the FD300 board. However, if the board is used by another application, loading the input settings being impossible, a warning message is displayed at the application start-up (Figure 7), and the Current input mode is enabled. The input mode from the selected input becomes unavailable. The Selected input radio button in the FD300 board settings dialog is dimmed.



Figure 7. The Lock FD300 Board warning message

Pressing the OK button in the Lock FD300 Board dialog switches the application to the mode of capturing data from the current input. The Cancel button closes the FDCapture application.

The Format... button opens the FDTM Board Properties/Format dialog (Figure 8) for selecting the FD300 board index and setting the video input format.

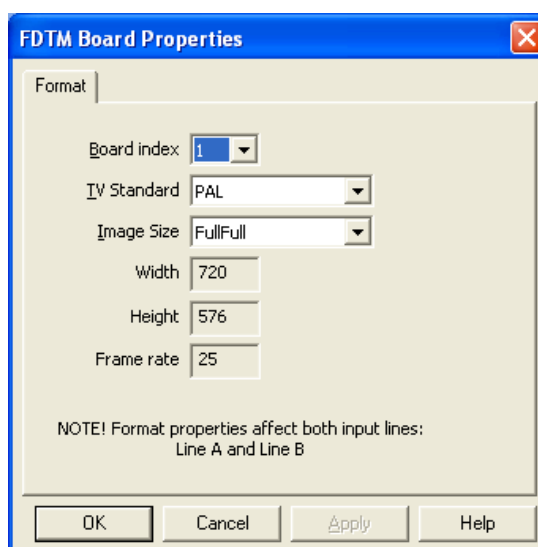



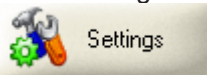

Figure 8. Format settings in the FDTM Board Properties/Format dialog

After all the parameters are set, the OK button closes the dialog with the settings saved. They are displayed on the FD300 board panel of the Program settings dialog (Figure 5), and after it is closed – on the right of the Video button on the Capture Control pane of the application main window (Figure 2). The information about the current input line, image size, frame rate, input video format, FD300 board index and field order (Upper, Lower) is to be displayed there.

If the option of updating information is on, the data is to be updated every second, since the board settings can be changed in real time mode from other applications working with it. Receiving the board information is quite a resource-intensive process, therefore at the data input the option may be disabled. In that case, information of the board is to be updated only when launching FDCapture and when exiting the settings dialog.

3. Audio Parameters Settings

The Capture with audio option in the Audio Capture Params panel (Figure 9) of the Program Settings dialog allows you to select whether data will be captured with or without sound. The panel can be opened by the Audio  button on the Capture Control pane of the application main window (Figure 2). That can also be done in the Program Settings dialog opened by pressing the

 Settings  button. Then, select the Audio Capture Params item in the object tree.

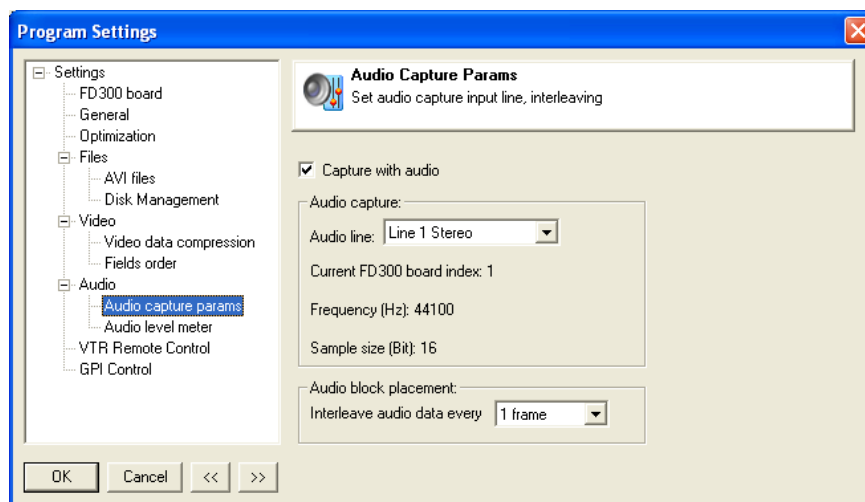


Figure 9. Audio settings

The dialog includes:

- An audio line on the selected FD300 board for the audio data input. In the Audio line drop-down list, it is possible to select either a stereo sound input (Line 1 Stereo, Line 2 Stereo, Line 3 Stereo) or mono sound input (Line 1 Left, Line 1 Right, Line 2 Left, Line 2 Right, Line 3 Left, Line 3 Right) from any of the three sound devices of the board.
- Parameters of the audio and video data interleaving in the resulting AVI file. The audio and video data blocks are interleaved in a resulting AVI file. First goes the audio block, then, follows the video block. The durations of the blocks are the same. They can be selected in the Interleave audio data every drop-down list.

Besides, the panel displays information about the current

FD300 board index, the sampling rate in the Frequency (Hz) string and the sample size in the Sample size (Bit) string.

After all the parameters are set and checked, press the OK button to close the dialog. Information about the audio line number, sampling rate, sample size, and audio signal type (mono/stereo) is displayed on the right of the Audio button on the Capture Control pane of the application main window (Figure 2). If data is captured without audio (the Capture with audio option is off), the field next to the button indicates Capture without audio.

4. Codec Parameters Settings

Pressing the **Codec** Video compression settings button on the Capture Control pane (Figure 2) opens the Video Data Compression panel of the Program settings dialog (Figure 10).

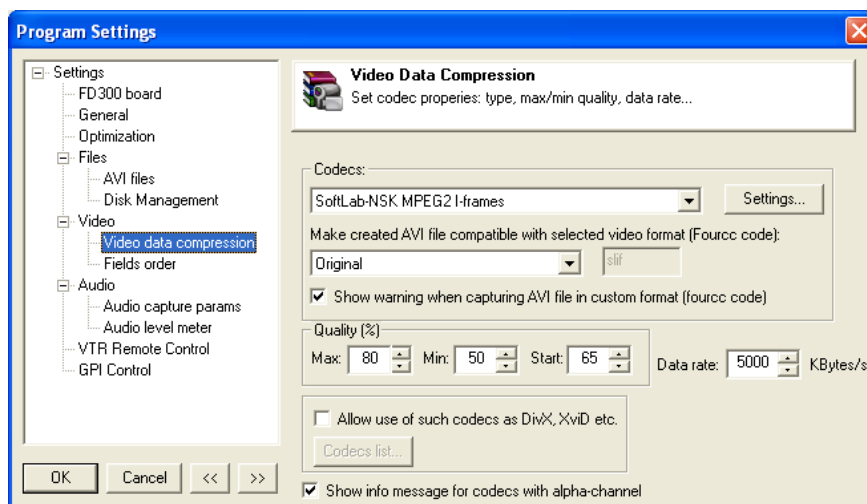


Figure 10. Codec settings

On the panel, you can set parameters of codec properties and a video compression mode. One of the available system codecs to be used for data compression is selected in the Codec drop-down list.

Besides, the four operating modes without compression are available:

- Uncompressed RGBA – 32 bits per pixel.
- Uncompressed RGB – 24 bits per pixel.
- Uncompressed UYVY – 16 bits per pixel.
- Uncompressed YUY2 – 16 bits per pixel.

The latter two modes use the standard system formats of video data representation: UYVY and YUY2, respectively.

Note: When capturing data from the Current output (see [Video Parameters Settings, Figure 5](#)), codecs with Alpha channel cannot be used, a warning message being displayed ([Figure 11](#)).

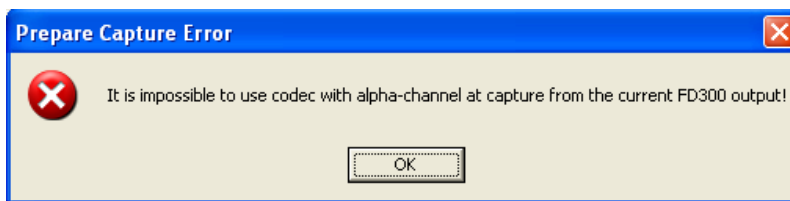


Figure 11. Warning message

The maximum, minimum and initial values of the compression quality parameter are specified in the Max quality, Min quality and Start quality fields for the codecs supporting quality control. Information about the current compression parameters is displayed in the application main window in the `SoftLab-NSK MPEG2 I-frames, 50-80/65, 5000` field next to the Codec button on the Capture control pane. The field contains: `codec_name (min_quality – max_quality/current_quality), rate`. During the capturing procedure, the information is constantly updated.

The required data rate is an important setting parameter that can be set in the Data rate (KB/sec) field. When recording an AVI file, the data rate is constantly controlled. In case of mismatch with the required rate value, the current compression quality is modified. The compression quality range lies within the limits set in the Min quality and Max quality fields. The initial value is taken from the Start quality field.

Pressing the Settings... button on the right of the field with a selected codec opens the codec settings dialog.

The Show info message for codecs with alpha channel option allows getting additional information when selecting a codec with alpha channel.

5. Optimization

Selecting the Optimization item opens a panel with settings of the capture procedure optimization (Figure 12).

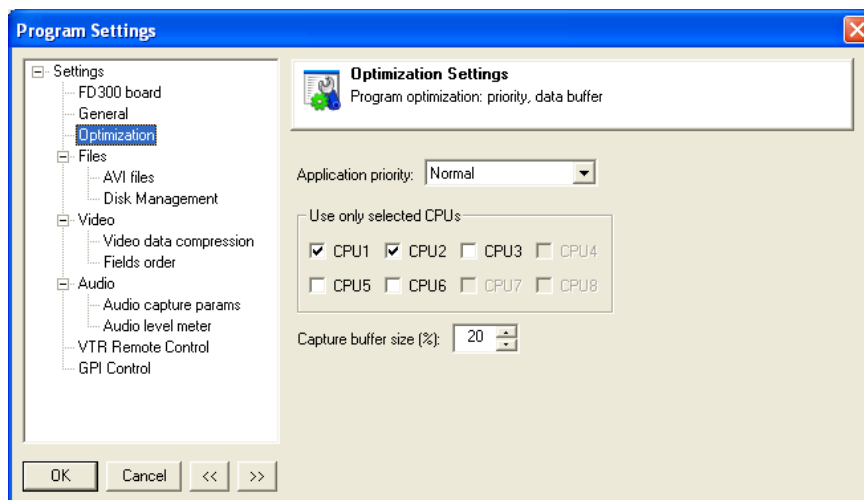


Figure 12. Optimization settings



The panel is used to set the application priority and buffer storage size when capturing data.

The application priority influences the application performance. The available items can be selected in the Application priority drop-down list: Normal, Above normal, High.

- ✓ **Important:** Be careful when allocating the system resources since setting a preferred position of one task above the others may result in complete occupation of resources by the task and consequential inability to perform other processes. The selection of the High priority may result in a sharp decrease in the system performance!

It's possible to set a limitation on using CPUs by the application in the Use only selected CPUs area. Thereby, the application tasks will be executed only on the CPUs with the checked check boxes

- ✓ **Important:** Incorrect allocation of the CPUs among the applications may result in a sharp decrease in the system performance!

The Capture buffer size (%) combo box allows specifying the size of the internal buffer to minimize dropping frames when capturing data in the moments of the maximum load on the processor and hard disk. The values in the combo box are presented in percent of the RAM value, from 10 to 100%.

Preview Control Pane

The Preview Control pane ([Figure 13](#)) is used to preview the data being captured. During data input the pane can be displayed or hidden with the Show/Hide preview panel button on the Capture Control pane (see [Application Main Window](#)), or with the Hide preview panel button located on the pane itself.

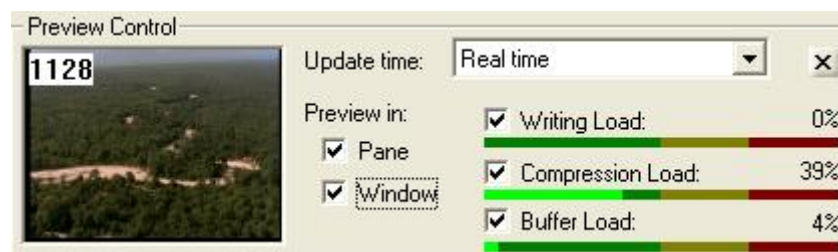


Figure 13. The Preview Control pane

If the Preview in Pane option is enabled, ([Figure 13](#)), it is possible to preview the captured video directly in the Preview Control pane. If the Preview in Window option is enabled, the captured video can be previewed in a separate window ([Figure 14](#)). Both options can be enabled simultaneously.

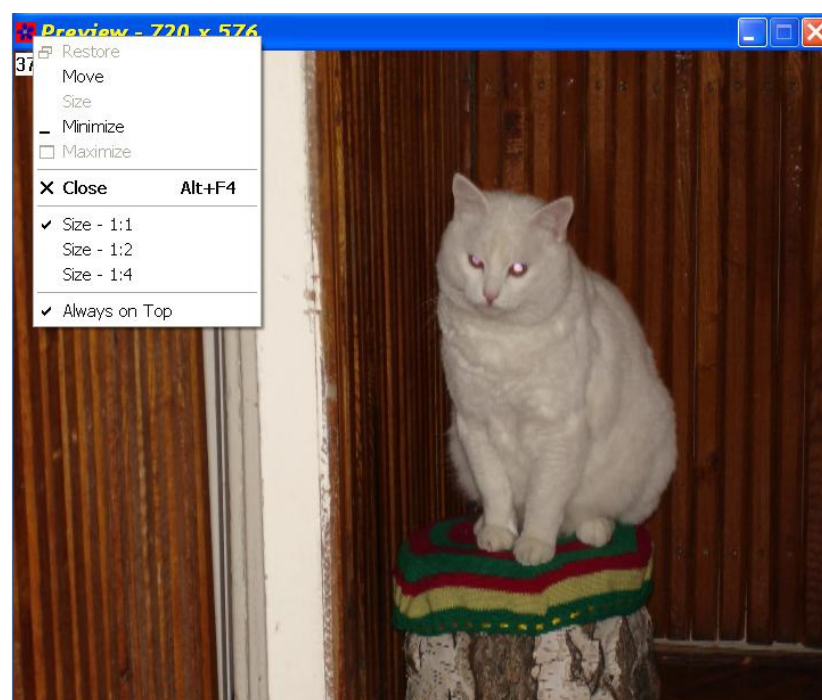


Figure 14. Preview Window

Selecting the Preview in Window option opens a separate window for previewing. A right click on the window title bar or icon opens a local menu. The window size displayed in the title bar can be changed by the Size - 1:1, Size - 1:2, Size - 1:4 commands. The Always on Top command allows displaying the previewing window always above the other windows. The Close command closes the window.



If the Writing Load, Compression Load, and Buffer Load options are enabled, the appropriate indicators display information about approximate load when recording an AVI file and compressing data.

Note: The indicators help to understand problems that may occur at data input (insufficient disk speed or insufficient CPU clock frequency).

The frequency of updating images in the preview window and displaying the approximate disk and CPU load can be modified in the Update time drop-down list.

Audio Control Pane

The Audio Control pane ([Figure 15](#)) of the application main window displays the settings of the audio device parameters and volume. The pane can be displayed or hidden only before capturing data is started or after finished. A hidden pane means the data is being captured without sound.

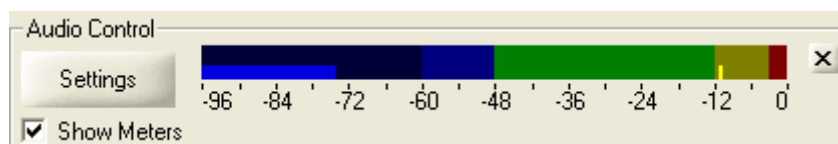

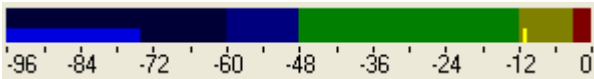



Figure 15. The Audio Control pane

The  button opens the Audio Capture Params panel ([Figure 9](#)) of the Program settings dialog.

The indicator  displays the volume on the selected device. The Show meters check box enables/disables displaying the volume indicator. The  button in the top right corner hides the pane.

A right click on the Audio Control pane opens a context menu with the Audio capture params, Audio level meter and Min dB limit commands.

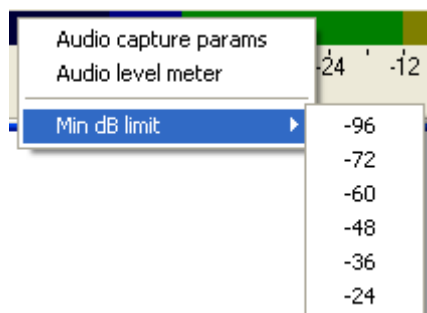


Figure 16. Context menu of the volume indicator

The Audio capture params command allows selecting an audio device and/or modifying its settings in the Audio capture params dialog of the application ([Figure 9](#)). The minimum value of the audio indicator can be set by the items of the Min dB limit submenu. The Audio level meter command allows modifying the settings of the audio indicator on the Audio level meter panel ([Figure 17](#)).

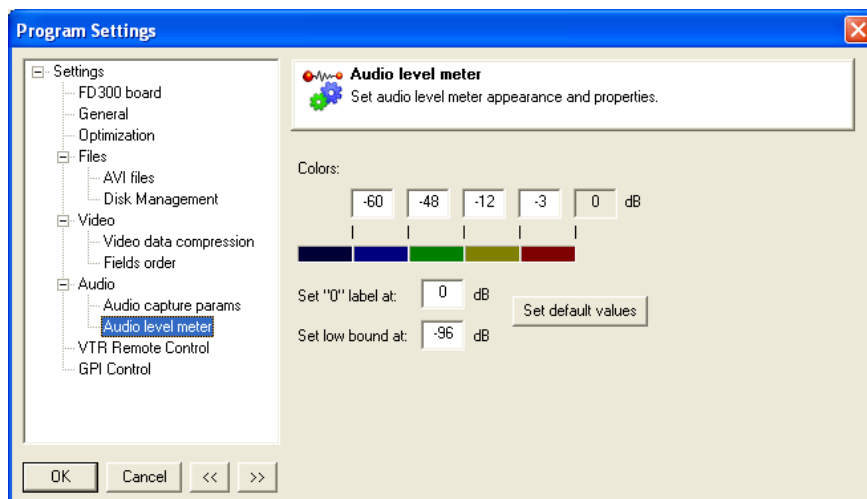


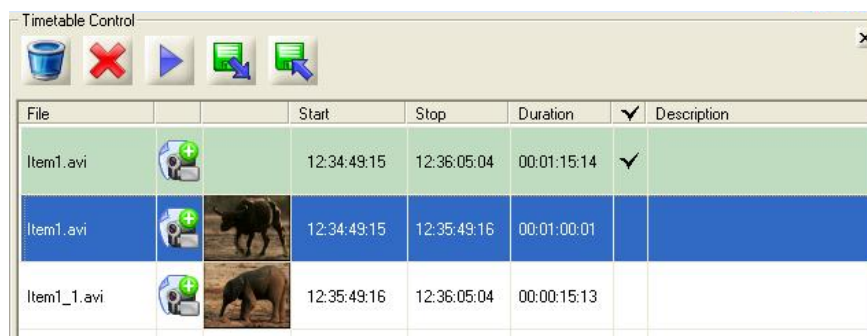
Figure 17. The Audio level meter panel

The Audio level meter panel is intended to adjust the appearance and properties of the audio level meter and allows:

- modifying positions of the bounds (relative to colors);
- setting a relative position of the 0 label;
- selecting a lower bound of the audio level meter;
- setting all the parameters of the audio level meter to defaults with the Set default values button.

Timetable Control Pane






The Timetable Control pane (Figure 18) of the FDCapture main window is used to display the data input results, schedules and to work with files containing timetables. The pane can be closed or opened during the data input. The set of the timetable columns depends on a selected input mode.



File		Start	Stop	Duration	Description
Item1.avi		12:34:49:15	12:36:05:04	00:01:15:14	✓
Item1.avi		12:34:49:15	12:35:49:16	00:01:00:01	
Item1_1.avi		12:35:49:16	12:36:05:04	00:00:15:13	





Figure 18. The Timetable Control pane

The buttons have the following functions:

-  clears a timetable list;
-  deletes selected files/base records from the timetable. It is impossible to delete the base record with which existing AVI files are associated; it is necessary to delete the files first, then – the base record;
-  loads a timetable from a file;
-  saves a timetable to a file;
-  plays back the AVI file corresponding to a given item in the timetable.

1. Timetable List


A set of the timetable columns depends on the selected input mode. Records in the list change their status during data input, which is indicated with the help of the various icons:

-  the record will be processed partly;
-  the record is currently being processed;
-  the record will not be processed;
-  the record has not been processed yet;

-  the record has been processed.

The columns of a timetable list have the following properties in each input mode.

For the base records in the timetable input mode:

- a double click on a cell in the column with the  icon includes/excludes the base record for the data input;
- a double click on a cell in the Description column opens a dialog for entering a description;
- a double click on a cell in other columns opens the timetable editor that allows adding, deleting and editing the base record.

For existing AVI files in all the data input modes:

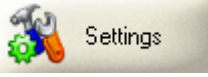
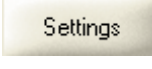
- a double click on a cell of the column with the first frame images allows playing the file without exiting the application.

For existing AVI files in a standard data input mode:

- a double click on a cell in the Description column opens a dialog for entering a description.

Program Settings

The overview of the Program Settings dialog is shown in [Figure 19](#). It can be opened in several ways:

- by pressing the Settings  button on the [Capture Control pane](#) (opens the last used panel);
- by pressing the Audio Settings  button on the [Audio Control pane](#) (opens the last used panel);
- from the Audio Control context menu (the Audio Capture Params opens, see [Audio Control Pane](#));
- by pressing the Video, Audio, or Codec buttons on the [Capture Control pane](#) (they open the settings panels of the FD300 board, audio and codec, respectively);
- by a double click on the information fields with the current settings of video, audio, and codec on the [Capture Control pane](#) (that opens the settings panels of FD300 board, audio and codec, respectively).

At the video and audio data input, the Program Settings dialog is not available.

The Program Settings dialog contains a pane with an object tree: all the groups of settings and property panels (of properties that can be modified). The current settings group that is being edited at the moment is highlighted. There are buttons in the lower part of the dialog that allow moving from one page to another (in cycles).

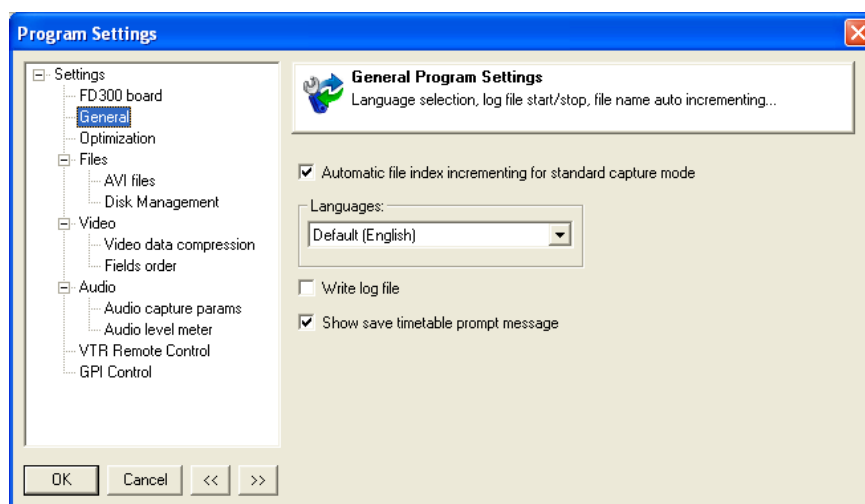


Figure 19. General Program Settings

The Languages drop-down list in the General Program Settings panel (see [Figure 19](#)) is used to select the application interface language. The default language is English. The Write log file check box allows you to enable/disable writing a log file of the input results (see [Log File](#)). The Automatic file index incrementing

for standard capture mode check box allows you to enable/disable automatic increment of the file index in a file name (see [Selecting and Modifying...](#)). The Show save timetable prompt message check box enables displaying a message prompting to save the timetable.

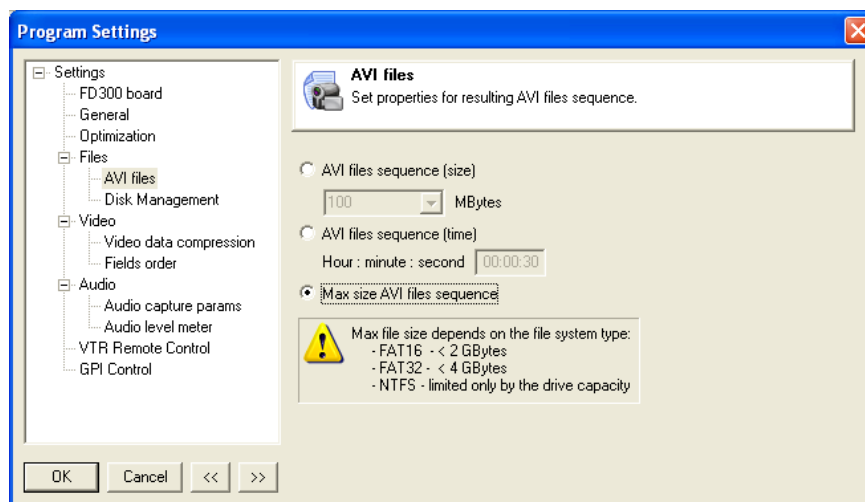


Figure 20. The AVI files settings

You can specify the parameters of a sequence of AVI files for the input results on the AVI files panel ([Figure 20](#)). Since there can be restrictions on the size of files (system restrictions and user requests), usually not a single file but a sequence of files is generated at the data input. The radio buttons of the panel allow selecting one of the following three modes:

- AVI files sequence (size) (a sequence of files according to their size); select the file size (in MB) in the drop-down list, or specify the value manually.
- AVI files sequence (time) (a series of files according to their duration); to set the required duration in the Hour : minute : second format.
- Max size AVI files sequence (a series of files of the maximum possible size); information about the maximum possible size of a file is given under the option.

File names in a sequence are formed of the first file name by adding the sequence numbers.

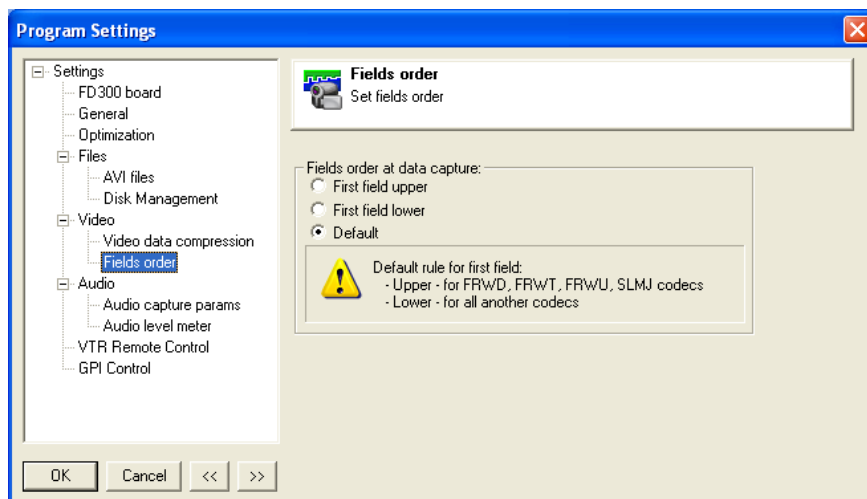


Figure 21. The Field order settings

The Field order panel of the Program Settings dialog is intended to select a field order when recording AVI files (Figure 21). The Upper field first, Lower field first, and Default radio buttons are used to set the respective field order. Below is displayed information about the default field order.

After a field order is selected, information about which field goes first is displayed on the right of the Video button on the [Capture Control pane](#).

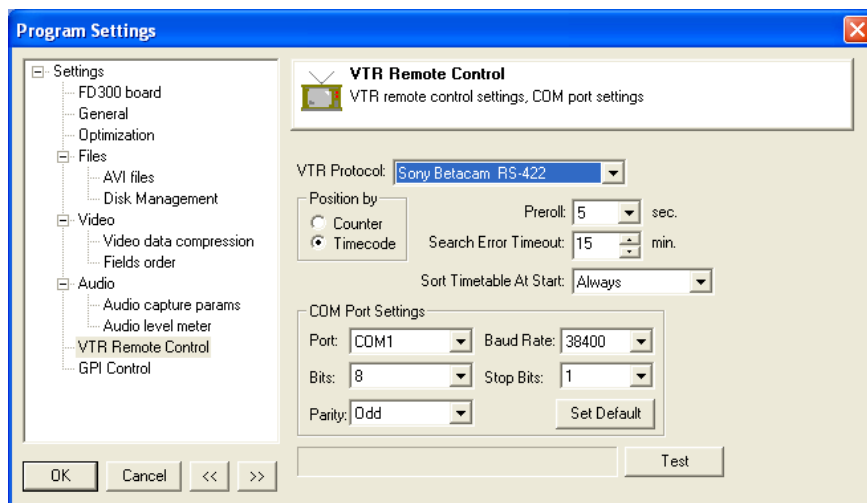


Figure 22. The VTR remote control settings

The VTR Remote Control panel (Figure 22) is used to adjust the remote control of the VTR and COM port. A VTR type is selected in the VTR Protocol drop-down list: Sony Betacam RS-422, Sony RS-232, JVC RS-232. In the Position by area, a position by Counter or by Timecode is selected. In the Preroll edit box, the required preroll value (in seconds) is specified. In the Search Error Timeout edit box, a timeout for error search (in minutes) is specified. The Sort Timetable At Start drop-down list allows selecting the mode of sorting the timetable: Always, Never or By inquiry.

The COM Port Settings area contains the following settings: Port,



Bits, Parity, Baud Rate, Stop Bits. It is possible to set the default values by pressing the Set Default button.

The rest of the Program Settings dialog panels are described in the corresponding Sections of the Guide.

Data Input Modes

The three data input modes are available in the application:

- Standard – continuous capturing data;
- Timetable – capturing data is performed according to a timetable set by the user;
- Capturing data from a VTR.

Selecting a data input mode is performed with a set of tabs on the Capture Control panel of the application main window ([Figure 2](#)). All the modes are described in more detail below.

1. Standard Capture Mode

Data input in this mode ([Figure 23](#)) is performed continuously, without breaks.

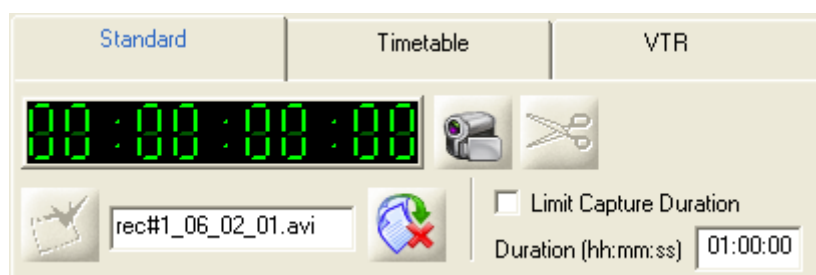



Figure 23. The Standard tab

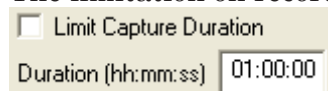
A file name is set in the field. By default a file name is formed as follows: rec_DD_MM_NN.avi, where:

- DD – the current day;
- MM – the current month;
- NN – the file number that is assigned to the file after scanning for a similar name through all the files in the folder selected for the data input results. If files with the similar name have not been found, the number assigned is 00. If have, the file name is formed by adding 1 to the maximum index found. For more details on forming a file name, see [Selecting and Modifying...](#)

After a new file name is entered in the field, press the Enter

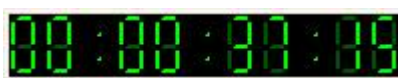
 button to fix it. After that, another button becomes available: Delete the file and capture a new one with the same name. The button allows deleting the previous file physically and recording a new one with the same name.

The limitation on record time can be set in the



group. The limitation stops data capture in the specified period of time. The Limit Capture Duration check box enables/disables the mode of the input time limita-

tion, the duration of input being specified in the “hour : minute : second” format in the Duration (hh:mm:ss) field. Note that it is possible to set this mode during data input when all the other changes of the input parameters are impossible.



The indicator  displays the current duration of the captured data in the “hour : minute : second : frames” format.



Pressing the Start capture  button starts the process of data



capture. The icon on the button changes to Stop capture .

The second click on the button stops data input.

1.1. Timetable List

An example of a timetable list for the standard mode of data input is shown in [Figure 24](#).


File		Start	Stop	Duration	Description
rec#1_07_02_55...		12:06:39:07	12:07:00:03	00:00:20:21	

Figure 24. Timetable list in the standard mode

The headings and functions of the timetable columns are described below (from left to right):

- **File** file name, the full path to a file being displayed in the tooltip;
- **Untitled** icon indicating the current status of a file (processed, being processed, etc., see [Timetable List](#)) in the tooltip;
- **Untitled** first frame image, mode of playing back the file from the timetable being displayed in the tooltip;
- **Start** time of data capture start (“hour : minute : second : frames”), the full date, including year, month and day being displayed in the tooltip;
- **Stop** time of data capture stop (“hour : minute : second : frames”), the full date, including year, month and day being displayed in the tooltip;
- **Duration** record duration (“hour : minute : second : frames”), the duration and the format being displayed in the tooltip;
- **Description** it is possible to enter any information about the current record into the column. For that, double-click the column. The Add Description dialog ([Figure 25](#)) opens. After entering the required infor-

mation, click OK to save it. The information is automatically displayed in the corresponding cell and its tooltip.

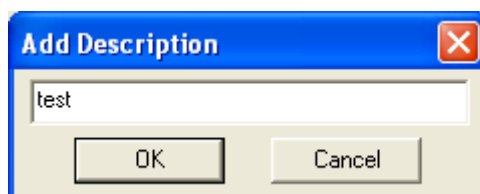


Figure 25. Add Description dialog

1.2. Sequence of Operations at Standard Capture Mode

It is implied that audio and video signal sources are properly connected to the FD300 board. It is necessary to correctly perform the following actions:

1. Make the required adjustments of video and audio in the Program Settings dialog.
2. Enable/disable the preview mode and adjust its parameters on the Preview Control pane.
3. Select a file name for the input.
4. Enable/disable the mode of the input time limitation.
5. Perform the data input preparation by pressing the corresponding button.
6. Start the procedure of capturing data by pressing the corresponding button.

Note: During the procedure of data input, it is impossible to modify settings, except for the input time limitation mode.

Note: Data input with the closed Audio Control pane automatically implies data input without audio.

Note: During the procedure of data input all the operations in the timetable list are not available, except for editing the file description.

2. Timetable Capture Mode

In the Timetable capture mode ([Figure 26](#)) data is captured according to the timetable created by the user beforehand.

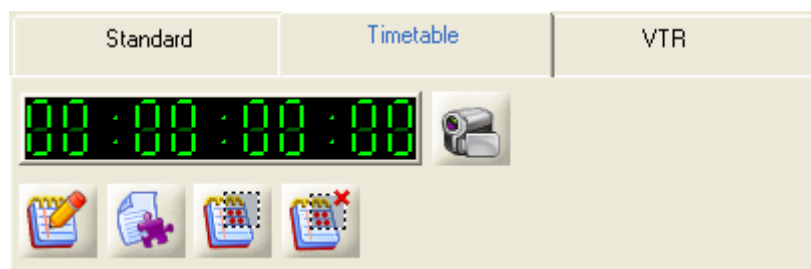


Figure 26. The Timetable tab



The indicator displays the duration of the captured data in the “hour : minute : second : frames” format.



Pressing the Timetable editor button opens the Timetable Editor dialog (Figure 35). The dialog allows you to add, delete or edit the records of a timetable (see [Timetable Editor](#)).



Pressing the Set file name template button opens the Set Timetable File Name Template dialog (Figure 38, see [File Name Template...](#)) for changing the template of file names.



Pressing the Start capture button starts the procedure of preparing data and input. The procedure includes checking the timetable, preparing data input, and selecting a timetable record. Capturing data proper starts at the specified start mo-



ment. The icon on the button changes to Stop capture, and a second click on the button stops capturing. If the preview mode is enabled, the input video will be displayed on the [Preview Control](#) pane.

2.1. Timetable List

An example of a timetable list for the Timetable capture mode is shown in Figure 27. It somewhat differs from the timetable list of the Standard mode.

File			Start	Stop	Duration	✓	Description
Item1.avi			12:29:05:20	12:30:21:12	00:01:15:17	✓	
Item1.avi			12:29:05:20	12:29:05:20	00:00:00:00		

Figure 27. Timetable list for the Timetable data input mode

The first six columns starting from the leftmost are identical to those in the Standard mode. The next column with the ✓ icon displays whether the base record is to be processed or not:

Item2.avi			16:54:48:09	16:56:18:09	00:01:30:00		
-----------	--	--	-------------	-------------	-------------	--	--

– the base record is excluded from the input list;

Item3.avi			16:57:59:02	16:58:29:02	00:00:30:00	✓	
-----------	--	--	-------------	-------------	-------------	---	--

– the base record is included in the input list.

The check mark can be set or cancelled in the two ways:



- With the corresponding buttons **Check all records/Uncheck all records** on the timetable input mode tab. The buttons check or uncheck all the base records.
- It is possible to check single base records by double-clicking a required cell.

The Description column is completely identical to the counterpart column of the Standard mode.

2.2. Base Record

When speaking about the timetable input mode, we operate with a notion of a base record in a timetable list. A base record is a record in a timetable list that generates an actual AVI file(s) as a result of processing. A base record in itself has nothing to do with an AVI file(s); it is just a task for data input at certain time, for a certain period of time. This is due to the fact that any timetable record can actually be represented as not a single file, but a sequence of AVI files, depending on the application settings.

Thus, there are two types of timetable records in the timetable input mode:

- records specifying time periods of data input – these are base records, which are always highlighted in an input list;
- records referring to actual AVI files.

2.3. Sequence of Operations at Timetable Capture Mode

It is implied that audio and video signal sources are properly connected to the FD300 board. To input data in the timetable mode, perform the following actions:

1. Create a timetable with the help of the embedded editor, or load it from an external text file.
2. Specify the timetable records to be used at data input.
3. Adjust the audio and video settings in the Program Settings dialog.
4. If necessary, set the preview mode and its parameters on the Preview Control pane.
5. Start the procedure of data input by pressing the appropriate button.

3. Capture Mode from VTR

In this mode, data is input from a VTR using Sony Betacam RS-422, Sony RS-232, and JVC RS-232 protocols. You can see the VTR mode tab (when no VTR is connected) in [Figure 28](#).

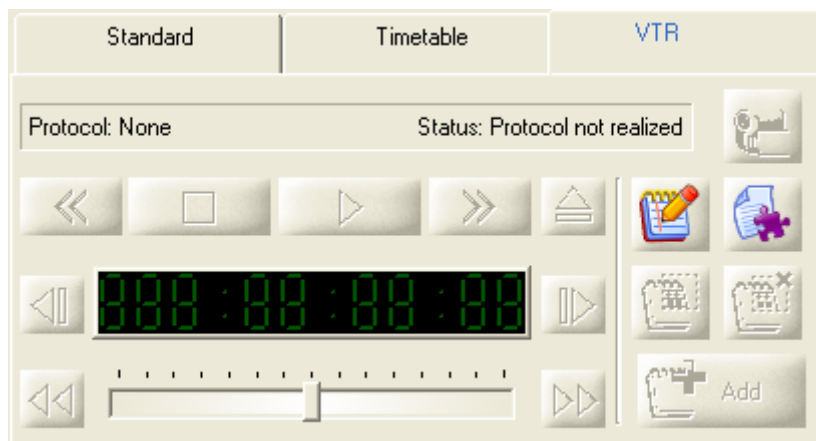


Figure 28. The VTR tab without a connected VTR

After a VTR is plugged to a COM port, and its settings are adjusted (see [VTR Settings](#)), the panel buttons become available as shown in [Figure 29](#).

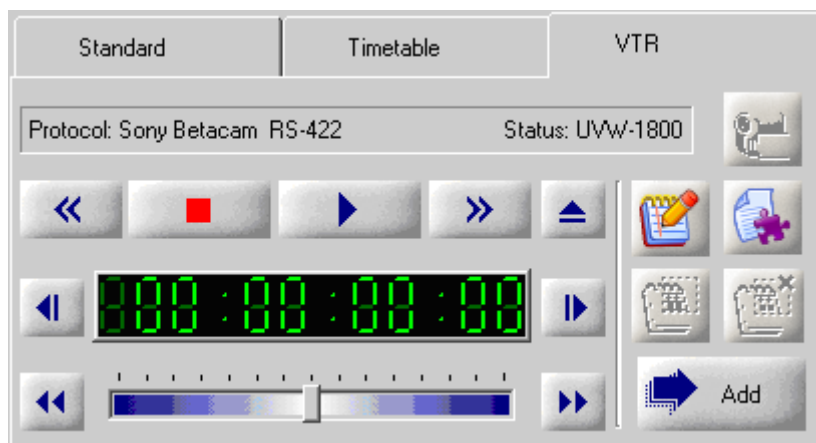






Figure 29. The VTR tab with a plugged VTR






Some of the controls in the VTR mode are the same as those in the Timetable mode. The indicator  displays the current position (time code) of the tape in the “hour : minute : second : frames” format.




Pressing the Timetable editor  button opens the Timetable Editor dialog ([Figure 35](#)) for timetable editing (see [Timetable Editor](#)). The Set file name template  button opens the Set Timetable File Name Template dialog ([Figure 38](#)) for template modifying (see [File Name Template...](#)).


Pressing the Start capture  button starts the procedure of preparing data and input data. The icon on the button changes

to Stop capture , and a second click on it stops the capturing. If the preview mode is enabled, the input video is displayed on the Preview Control pane.

The Check/Uncheck all records  buttons on the VTR tab select or cancel processing of all the base records at the same time.

The rest of the buttons are intended to control the VTR: play back , stop playback , rewind  and fast forward . Pressing the  button ejects a cassette from the VTR.

The ,  buttons are intended to perform frame-accurate search when searching for a particular spot in a clip. The block of controls  allows winding the VTR tape with a various speed that can be changed by the regulator between the buttons.

The  button on the VTR tab is intended to add new records to the timetable (see [Adding Records to...](#)).

3.1. VTR Settings

To perform data input from a VTR, connect it to a COM port. After that, the VTR parameters are adjusted on the VTR Remote Control panel (Figure 30) of the Program Settings dialog.

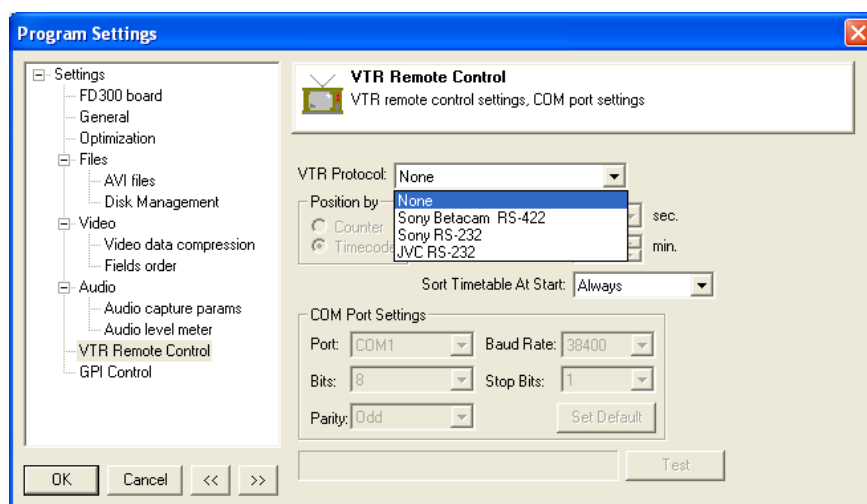


Figure 30. Selecting a VTR protocol

The VTR Protocol drop-down list is used to select a protocol according to the type of the videotape recorder currently plugged.

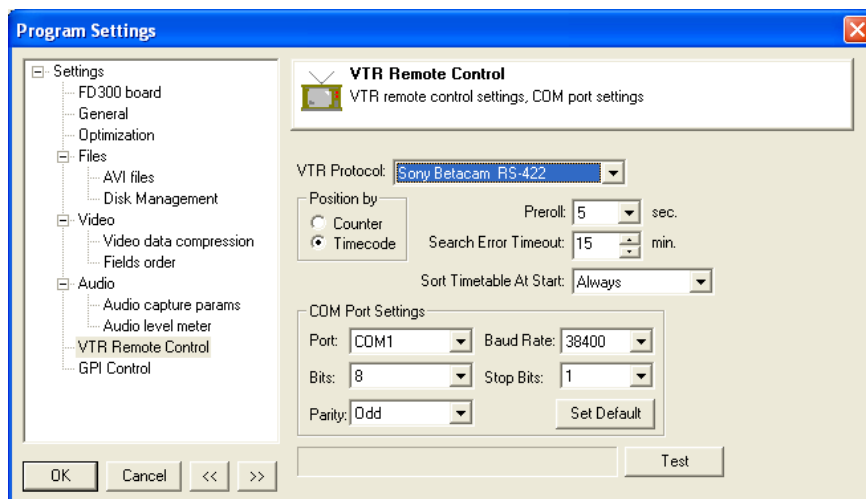


Figure 31. Settings result

After a protocol is selected, set the VTR parameters. Select the way of positioning on tape: by Counter or by Timecode.

The Preroll field is intended to specify the time interval used to search the border of a clip at the Timetable mode data input. That is necessary for the VTR to have all the parameters required for playback (speed, synchronization) by the moment of the capture start. Thus, a border of the required clip is being searched for not by the Mark In time, but earlier by the specified value of the Preroll.

The Search Error Timeout field is used to set the maximum time of searching a clip border for data input. If the required clip is not found during the given period (for example, the required time code is absent), the search will stop and the processing of the next clip will begin.

The Sort Timetable At Start drop-down list is intended to select a type of sorting timetable records at data input from the tape: Always, Ask, Never. The records are sorted according to the time codes. Since different clips for data input on the VTR tape can be located arbitrarily in the timetable (various values of Mark In), it is better to optimize their search on tape by preliminary sorting them so that the passage from one task to another is minimum. Setting the Ask mode enables additional confirmation for sorting at the beginning of executing the timetable. In the Always mode records are always sorted, and in the Never mode they are never sorted.

The COM Port Settings area is intended to adjust the COM port settings to control a VTR according to its technical parameters. Pressing the Set Default button sets the defaults for the selected protocol in the fields of the area.

Pressing the Test button allows checking whether the parameters settings are correct. If all the settings are adjusted correctly, pressing the button displays the type of the currently

connected VTR in the field on the left of the button ([Figure 31](#)).

After all the settings are done, the Program Settings dialog may be closed, and all the further operations when capturing data from the VTR are performed with the VTR pane buttons of the application main window ([Figure 29](#)).

3.2. Adding Records to Timetable

In the VTR capture mode the two ways of adding records to a timetable are available: using the timetable editor (see [Adding and Editing...](#)) and using the Add button on the VTR tab.

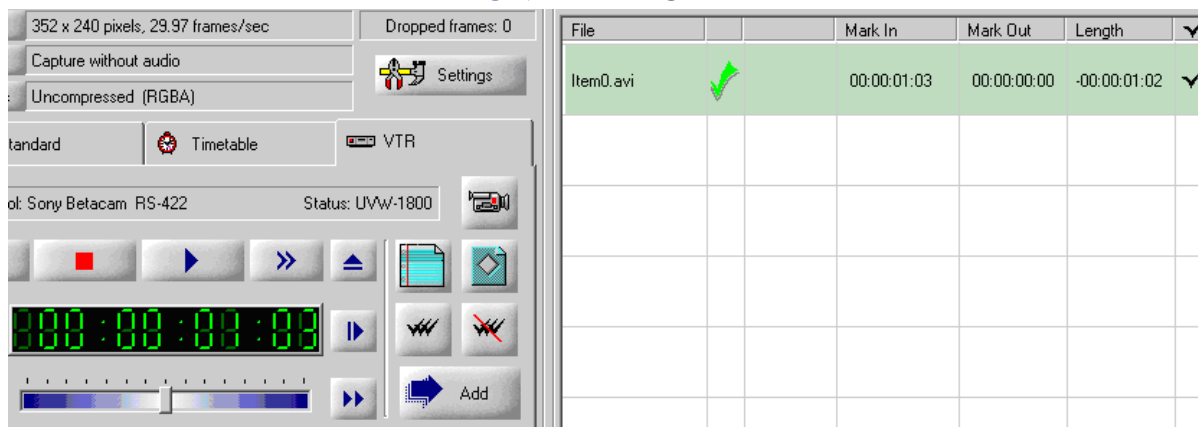


Figure 32. Setting the beginning of data input in the VTR mode

Adding records with the Add button is performed as follows:

1. Find a new record beginning mark (Mark In) with the help of the VTR control buttons. Pressing the Add button adds the mark to the timetable list (to the Mark In column). In the Mark Out column (the end), the mark value at the moment is 00:00:00:00 ([Figure 32](#)).
2. Find a new record ending mark (Mark Out) with the help of the VTR control buttons. Pressing the Add button adds the value to the timetable list (to the Mark Out column) ([Figure 33](#)).

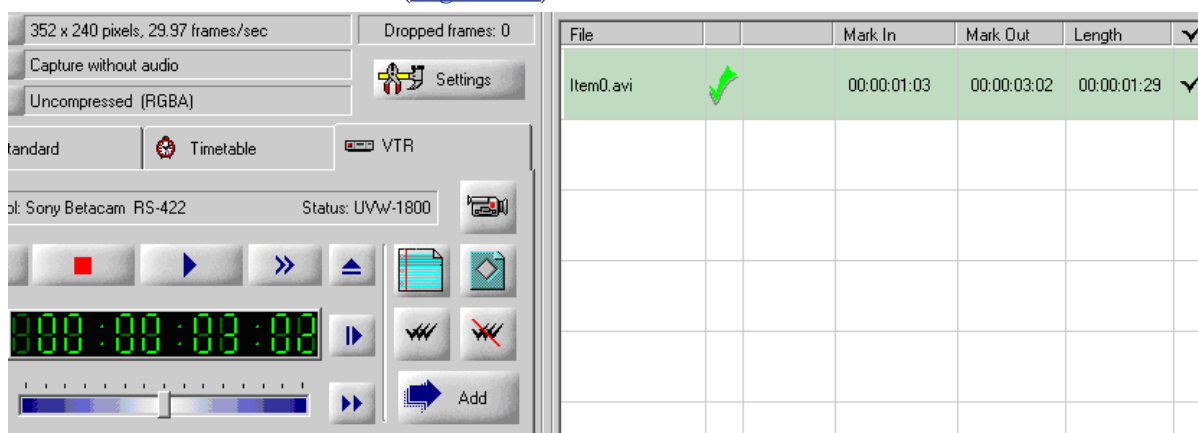


Figure 33. Setting the record mark out

Thereby, the timetable list for data input is filled with the help of the Add button. That allows generating only the last list

record: at first a Mark In value is added, then the Mark Out value of the same record is checked. If it is 00:00:00:00, the specified mark is added to the Mark Out column. Otherwise the mark is added to a new record in the Mark In column.

It is possible to edit the Mark In and Mark Out values manually. Double-click a field in columns in order to open the built-in record marks editor.

Any click outside the Mark In, Mark Out column cells closes the mark editor and saves the last values. In that case the Length column parameter value is synchronously changed.

3.3. Timetable List

The appearance and contents of the timetable list in the VTR mode are similar to those of timetable lists in other modes described above ([Figure 34](#)).

File		Mark In	Mark Out	Length	▼	Description
Item0.avi		00:00:01:03	00:00:00:00	-00:00:01:02	▼	

Figure 34. Timetable list in the VTR mode

The headings and functions of the timetable columns are described below (from left to right):

- **File** file name, the full path to a file being displayed in the tooltip;
- **Untitled** icon indicating the current status of a file (processed, being processed, etc., see [Timetable List](#)); the current file status being displayed in the tooltip;
- **Untitled** first frame image, the mode of playing the file from the timetable being displayed in the tooltip;
- **Start** time of data capture start (“hours : minutes : seconds : frames”);
- **Stop** time of data capture stop (“hours : minutes : seconds : frames”);
- **Length** record duration (“hours : minutes : seconds : frames”), the record duration being displayed in the tooltip;
- **Column with the icon ▼** indicates whether the current base record is to be processed or not;
- **Description** It is possible to enter any information about the current record into the column. For that, double-click the column. The Add Description dialog ([Figure 25](#)) opens. After entering the required information, click OK to save it. The information is automatically displayed in the corresponding cell and its tooltip.



3.4. Sequence of Operations at VTR Capture Mode

It is implied that a VTR is properly connected to the COM port. To input data in the VTR mode, perform the following actions:

1. Adjust the VTR.
2. Adjust the required VTR and COM port settings on the VTR Remote Control panel of the Program Settings dialog ([Figure 31](#)).
3. Create a timetable using the embedded editor (see [Time-table Editor](#)) or the Add button (see [Adding Records to...](#)).
4. Check the records in the timetable list to be used when capturing data.
5. Adjust the audio, video, codec, etc. settings for data input on the corresponding panels of the [Program Settings](#) dialog.
6. Enable/disable the preview mode and set its parameters on the [Preview Control](#) pane.
7. Start the procedure of data capture by pressing the appropriate button.



Log File

The results of data input can be registered in a log file – Name. fcl. It is a text file with the *.fcl extension. The file is named by adding to the FDCaptureLog_ part a full date including year, month, day, hour, minute and second of the capture start. For example: FDCaptureLog_2003_08_11_09_45_18.fcl.

Each string within a log file refers to a captured AVI file and contains information about its name, start and end time of data input (in the “year.month.day_hour:minute:second” format) and description (if present).

For example:

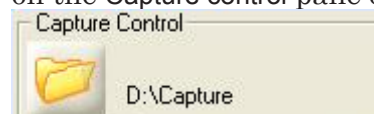
.....

“rec_11_08_00.avi” 2003.08.11_09:51:21:15 2003.08.11_09:51:24:02

“rec_11_08_01.avi” 2003.08.11_09:51:24:02 2003.08.11_09:51:28:23

....

The log file is located in the current directory displayed on the Capture control pane of the application main window



. AVI files with the data input results are located in the same directory.

It is possible to set/cancel the option of recording a log file with the help of the Write log file check box on the General Program settings panel of the Program Settings dialog.

A log file can be viewed with a system text editor (for example, Notepad) or directly in the application. To view a log file in the application, load it with the help of the Load timetable from file



button on the Timetable Control pane. At that, the timetable list is filled with the information from the log file. You can delete the viewed file from the timetable list by pressing the Clear

timetable list  button.



Selecting and Modifying File Names

Since a user can select a mode allowing to capture data as a sequence of AVI files, there are different ways of naming files.

1. Standard capture mode

At the Standard capture mode, a file name and its start index are specified in the text field on the Standard tab of the application main window. Pressing the Enter edited file



name button saves the entered name. The name is used for each subsequent file with automatically increased index. The Automatic file index incrementing for standard capture mode option can be set or cancelled in the application settings on the General Program Settings panel.

Note: If the Automatic file index incrementing for standard capture mode option is disabled, you will not get a sequence of files since every new file is recorded instead of the previous with the same name.

2. Timetable and VTR Capture Modes

Since the Timetable and VTR modes use timetables with base records, it's possible to have different names for different base records. The application supports three templates for naming base records in the modes. The templates are described in more detail in [File Name Template...](#)

Timetable Editor

The timetable editor ([Figure 35](#)) is used to add, delete, and edit records and modify file names template in the Timetable and VTR capture modes. A current selected mode is displayed in the title bar of the Timetable Editor dialog.

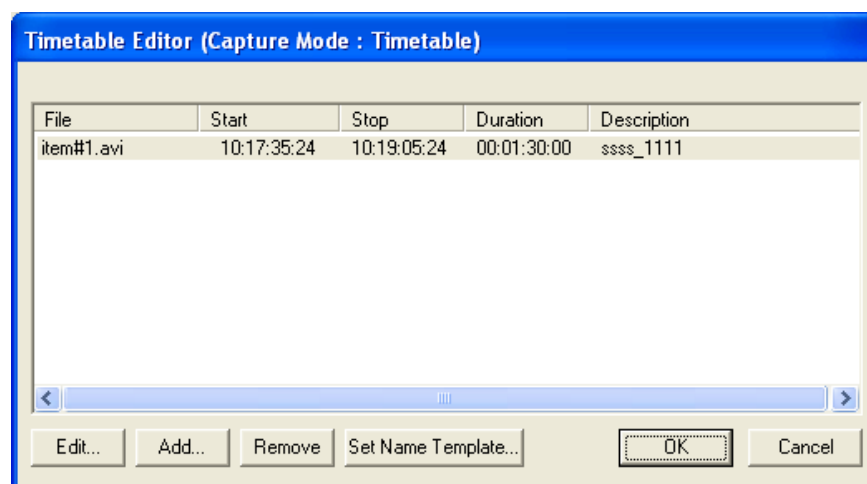


Figure 35. The Timetable Editor dialog

Pressing the Add... button in the timetable editor opens the Add New Record dialog ([Figure 36](#)). Pressing the Edit... button opens the Edit Selected Record dialog. It is possible to modify the file name, its description, and the time of data input start/end in this dialog. Its appearance and functionality are identical to the Add New Record dialog.

Pressing the Set name template... button opens the Set timetable file name template dialog ([Figure 38](#)).

The Remove button deletes a selected record from the timetable list.

1. Adding and Editing Records in Timetable List

Pressing the Add... button in the timetable editor opens the Add New Record dialog ([Figure 36](#)). The dialog is used to specify a file name, add its description, and set the start/end time of data capture. Besides, the dialog displays information of a record duration and the current folder.

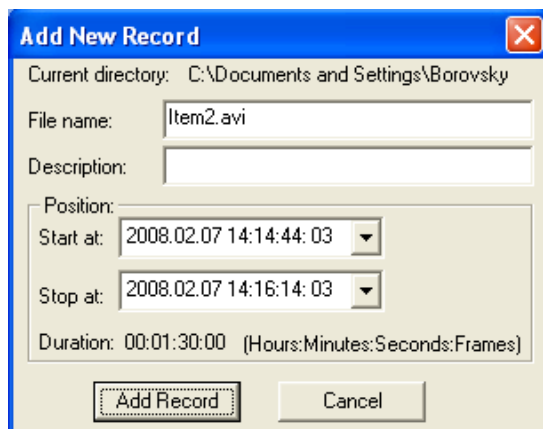


Figure 36. The Add New Record dialog in the Timetable mode

The default start time value of a new record is set according to the current time and date. Its default duration is 30 seconds.

Pressing the Add Record button closes the dialog, and a new record after check for being correct is added to a timetable list of the timetable editor. When a new record is added to the list, the whole timetable is re-sorted according to the start time value.

The correctness of a records is checked as follows:

- The duration of a record must be no less than 30 seconds.
- The interval between successive records must be no less than 10 seconds.

If one of these requirements is not met, you receive an error message.

In the VTR capture mode, the dialog somewhat differs from the described above (Figure 37). The beginning and the end of a record are set not by the input date. The Mark In and Mark Out positions are time codes of the VTR tape. The interval between records is not checked.

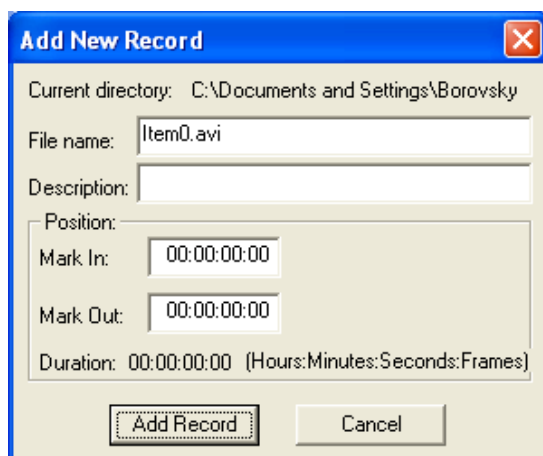


Figure 37. The Add New Record dialog in the VTR mode

File Name Template Editor

The Timetable and VTR capture modes allow creating templates for file names with the capture results in the Set Timetable File Name Template dialog (Figure 38). Strictly speaking, that refers to the names of base records. The names of AVI files proper with the capture results are created of the names of the corresponding base records and the sequence numbers. Pressing the Set Name Template... button in the Timetable Editor (Figure 35) opens a dialog for setting a template for file names.

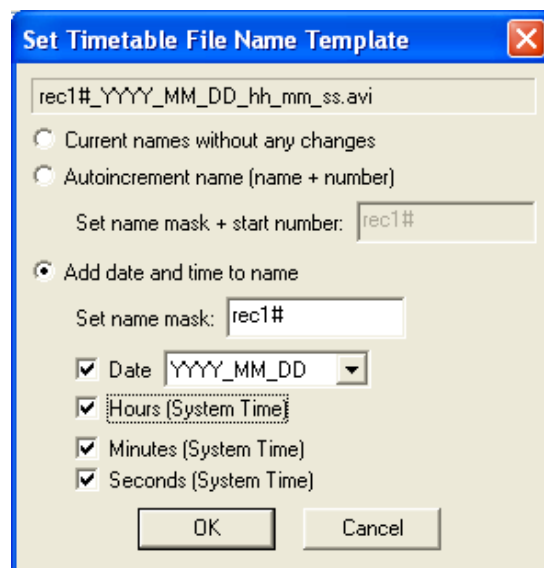


Figure 38. File name template editor

There are three different templates:

- Current names without any changes. All the names of the base records remain as given by the user.
- Auto increment name (name + number). A record is named in the NAME_NUMBER format. The user specifies a name and initial number for the first base record; the following names are automatically changed according to a record order in the timetable list. Specify the name and initial number in the Set name mask and Start number fields.
- Add date and time to name. A record is named in the NAME_DATE_TIME format. The user specifies a name and format of date and time, which are to be added to the name. The year, month and date are current, and time presents the beginning of a record. Specify the name in the Set name mask field. The check boxes are used to form the presentation of date/time. The drop-down list allows you to select a date format from the available ones.



Useful Links

<http://www.softlab-nsk.com/forward/docs.html>