

FDReferee Workplace For Video Goal Judge



Record of match, mark and
review of sport events

*Revision as of
January 13, 2011*

User's Guide

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Reorient or relocate the receiving antenna.

Increase the separation between the equipment and receiver.

Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

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Introduction

The document describes a work place for a video goal judge who operates with the «Forward Referee» system.

The guide has the information on dealing with the FDRReferee and RPMStorageManager applications included in the «Forward Referee» system.

The FDRReferee application is used for:

- marking important sport events (goal, violation etc.) when recording of the match is being implemented;
- reviewing recording disputed moments at any time by video goal judge;
- making a video report at the end of the match.

The RPMStorageManager application is used for working with storages, i.e.:

- preparing storages for recording new match;
- archiving, dearchiving and deleting of records of previous matches.



General Scheme of Dealing with Applications Included into the Forward Referee System


Before match	Operator: 1. Launches the FDReplayVideoIn applications and starts recording of data into storages. 2. Launches the FDReferee application.
During match	The match is automatically recorded into storages by means of the FDReplay-VideoIn application. Operator does not participate here. Operator deals with the FDReferee application: – marks interesting events during match; – reviews disputable events of the match on request of video goal judge.
After match	Operator deals with the applications: 1. FDReplayVideoIn: <ul style="list-style-type: none">● stops recording of data into storages;● stops work of the application. 2. FDReferee: <ul style="list-style-type: none">● creates video report with important events of the match;● stops work of the application. 3. RPMStorageManager: <ul style="list-style-type: none">● launches the application;● transfers records of the match from storages into archive;● stops work of the application.

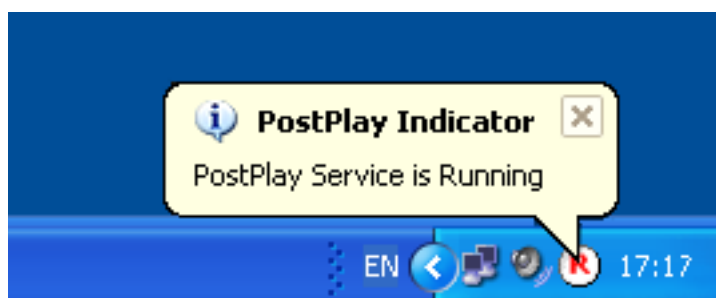
This document provides with a detailed description of operator instructions given above.



FDR Referee Launch

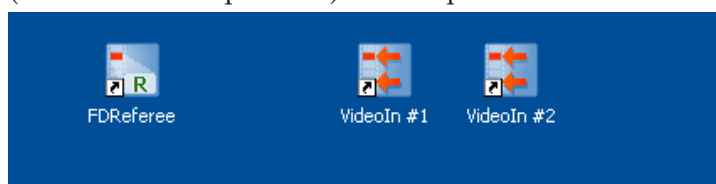
To launch the application:

1. Turn on PC.
2. Wait till the pop-up message on launching of the PostPlay service appears above the  icon in the Windows taskbar notification area (usually located in the bottom right corner of your desktop).

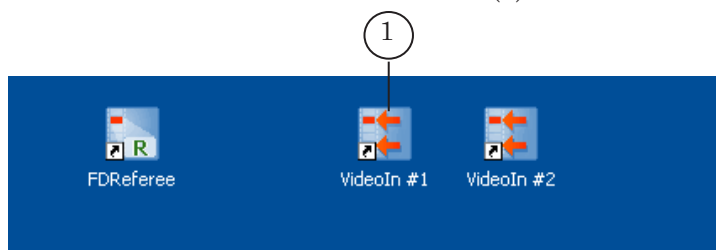


Note: The PostPlay service and the PostPlay Indicator application are both automatically launched when Windows is started. The PostPlay service and the PostPlay Indicator application are components that are necessary for working of the «Forward Referee» system.

3. Shortcuts of all necessary for the user applications (FDR Referee components) will be placed on the desktop.

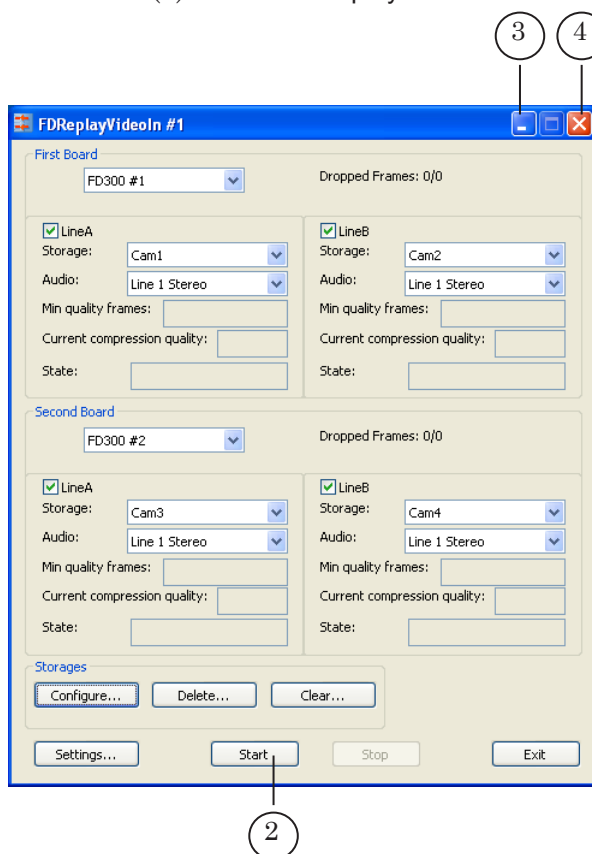




4. Double-click the VideoIn #1 shortcut (1).






5. Click Start (2) in the FDReplayVideoin #1 window.



6. Minimize the FDReplayVideoin #1 window by clicking the  (3) or  (4) buttons located in the window title bar.

The application continues working. The  icon (5) appears in the taskbar notification area.

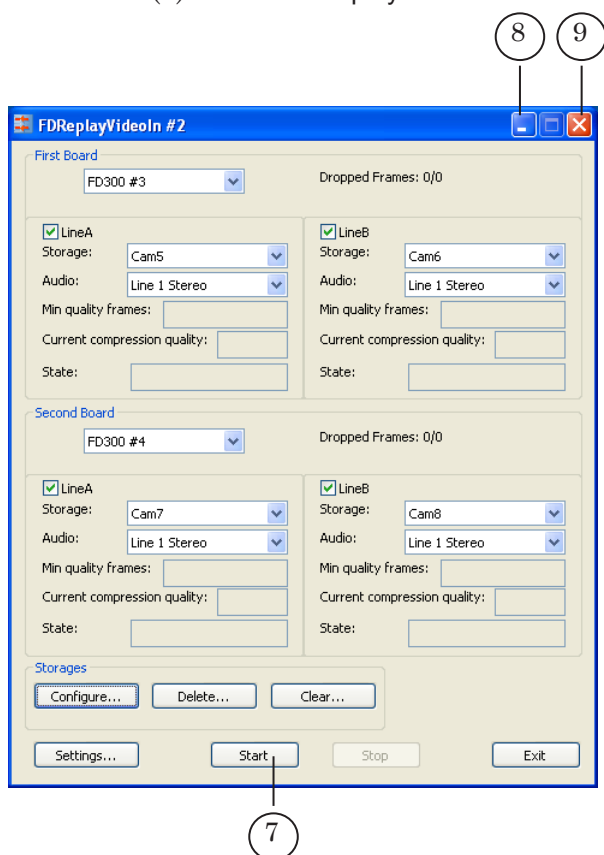





7. Double-click VideoIn #2 (6).

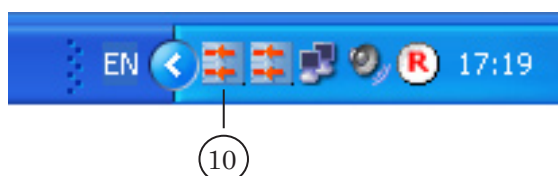




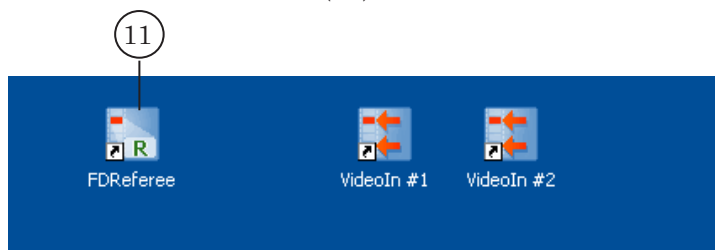
8. Click Start (7) in the FDReplayVideoIn #2 window.



Minimize the FDReplayVideoIn #2 window by clicking the  (8) or  (9) buttons in the window title bar. The application continues working. The  icon (10) appears in the taskbar notification area.



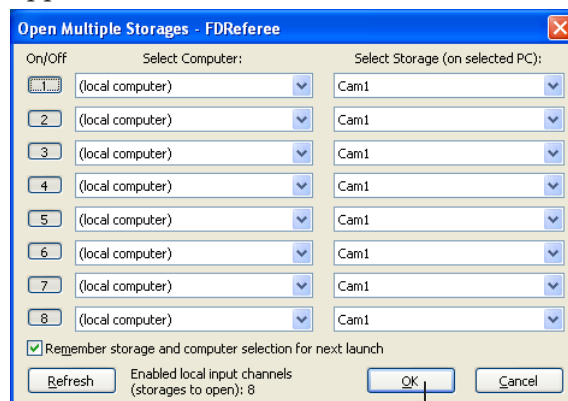
9. Double-click FDReferee (11).





10. Either the Open Multiple Storages - FDRreferee window or the main application window appears depending on the settings of the application.

Click OK (12) if the Open Multiple Storages - FDRreferee window appears.

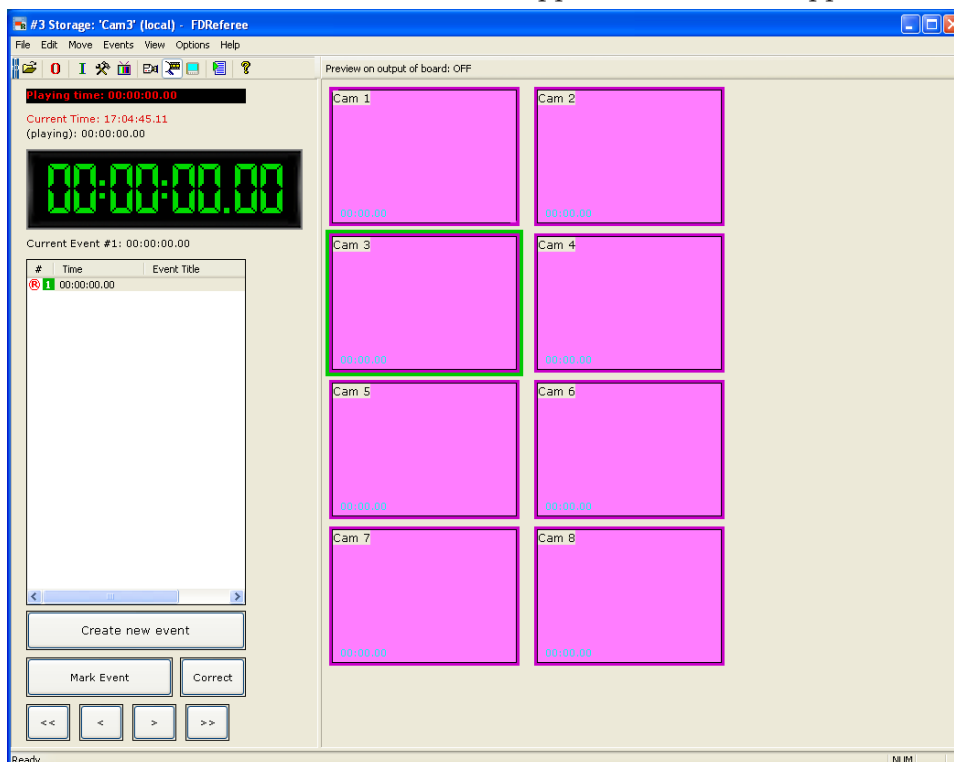


12

A list of specified storages on your PC may differ from presented on the picture. It depends on the settings of the concrete system.

Usually storages are selected correctly when configuration of the system is being implemented and it is not required to change it.

11. The main FDRreferee application window appears.



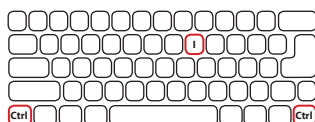


Time and titles of preview windows may differ from presented on the picture. It depends on the settings of the concrete system.

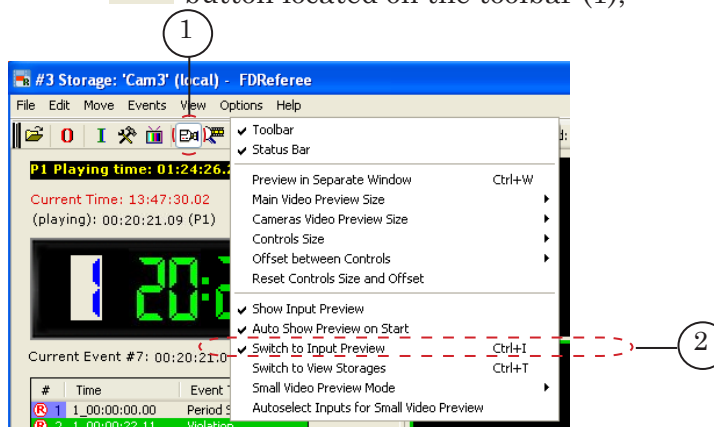
Location and dimensions of preview windows can be adjusted.

12. Switch to the preview mode to display current video from cameras in preview window. Switching can be implemented:

- using the Ctrl+I keys combination;



- via the  button located on the toolbar (1);

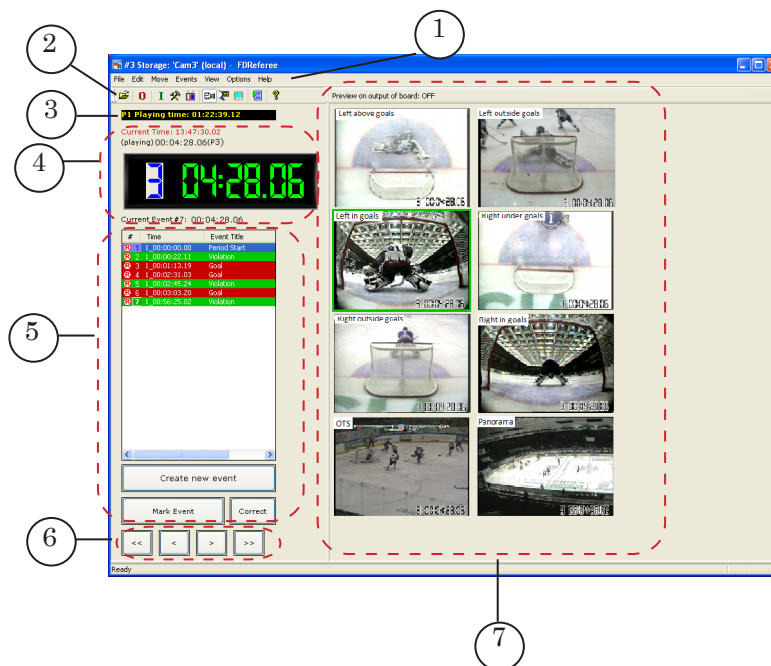


- via the View > Switch to Input Preview menu command (2).



Main Application Window

1. Main Window Overview



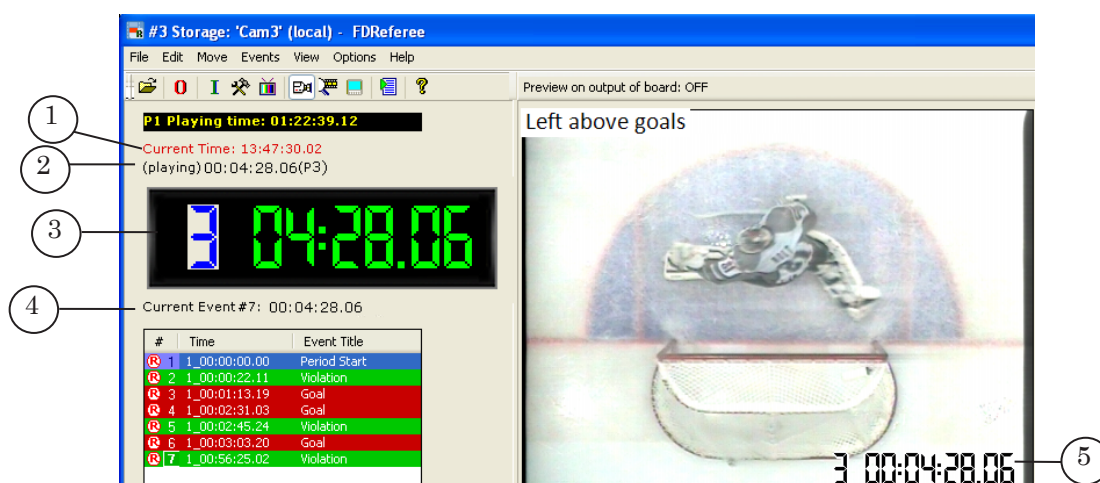
Elements of the main application window:

- (1) – main menu;
- (2) – toolbar;
- (3) – field with the current playing time;
- (4) – elements that are used to display the information on the current position of record playback (detailed information is given below);
- (5) – elements that are used to work with the events (detailed information is given below);
- (6) – buttons that are used to move on recorded video material;
- (7) – windows for reviewing video data received/recorded by different cameras.



2. Displaying of the Current Video Record Position

The main application window displays the following information on the current position of a video record:



- (1) is current position time;
- (2), (3), (5) indicate playing time that corresponds to the current position;
- (4) is the information on the current event (number and time of event mark).

3. Elements For Working With Events

3.1. General Information

An event is an important occurrence happened during any match that is specially marked by the operator.

The event can be marked either directly after it has happened or later using recorded material.

A list of marked events is displayed in the main application window in the form of the table.

Current Event #7: 00:56:25.02

#	Time	Event Title
1	00:00:03.02	
2	1_00:00:22.11	Violation
3	1_00:01:13.19	Goal
4	1_00:02:31.03	Goal
5	1_00:02:45.24	Violation

Circled number 1 points to the table, and circled number 2 points to the first row of the table.

The application provides a possibility of marking the events and assigning them to different types, for example, Goal or Violation. Events that have type are marked with different colors (1). Events without type specification are not coloured (2).



«Special event» denotes an event that has type specification.

The name and the color of special events are user-specified.

3.2. Table With Events List

Every row of the table corresponds to the single event. Rows with events of the same type are marked with the same colour.

Current Event #7: 00:56:25.02

#	Time	Event Title
1	1_00:00:00.00	Period Start
2	1_00:00:22.11	Violation
3	1_00:01:13.19	Goal
4	1_00:02:31.03	Goal
5	1_00:02:45.24	Violation
6	1_00:03:03.20	Goal
7	1_00:56:25.02	Violation

The following information on events is displayed in the table:

- number of event is in the # column;
- the Time column indicates event mark time in the period_hh:mm:ss:frames format;
- name of the event type (Violation, Goal etc.) is displayed in the Event Title the column.

3.3. Current Event

Event selected in the event list becomes the current one. The number of this event is marked by green (1).

3	1_00:01:13.19	Goal
4	1_00:02:31.03	Goal
5	1_00:02:45.24	Violation
6	1_00:03:03.20	Goal
7	1_00:56:25.02	Violation

1

When an event is selected as the current one its frames are displayed in preview windows.

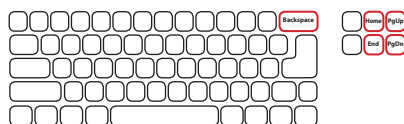
When an event is marked the current position automatically moves to the event time and marked event becomes the current one.

Let we select any event as a current one. Then we change current position and corresponding frame will be displayed in preview windows. Selected event remains a current one and you may return to its time mark by clicking «0».



Double-click line with event to mark it as a current one. You can also move between events via the following keys:

- PgUp is used to move to the previous event and to select it as the current one;
- PgDn is used to move to the next event and to select it as the current one;
- Backspace, End is used to move to the last event and to select it as the current one.





Operator Actions During the Match

1. Marking of Event When It Happens

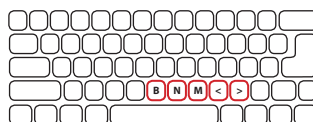
1.1. Marking of Event with Type Specification (Special Event)

The event can be marked in one of the following ways:

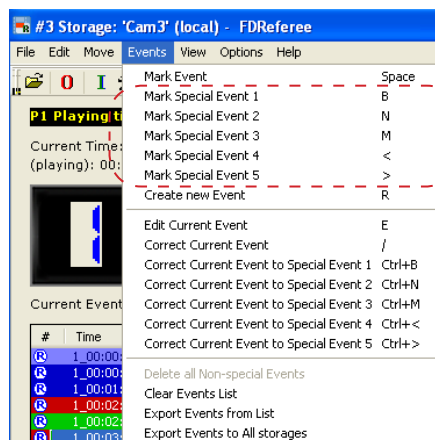
- by using keyboard shortcuts:

Table 1. Keyboard Shortcuts

Shortcut	Used to mark...
B	Special event 1 (by default – Goal)
N	Special event 2 (by default – Danger)
M	Special event 3 (by default – Violation)
<	Special event 4
>	Special event 5



- via the Events > Mark Special Event N menu command, where N is the number of the special event.

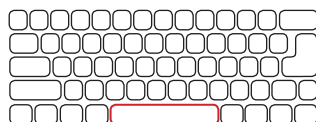




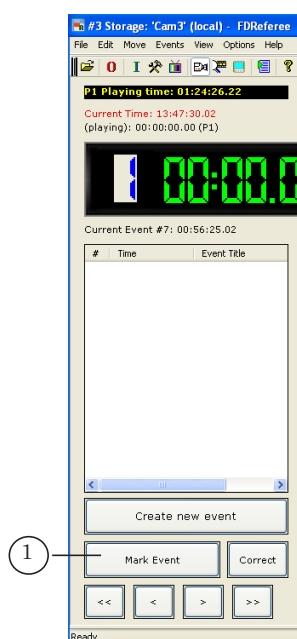
1.2. Marking of Event Without Type Specification

The event without type specification can be marked in one of the following ways:

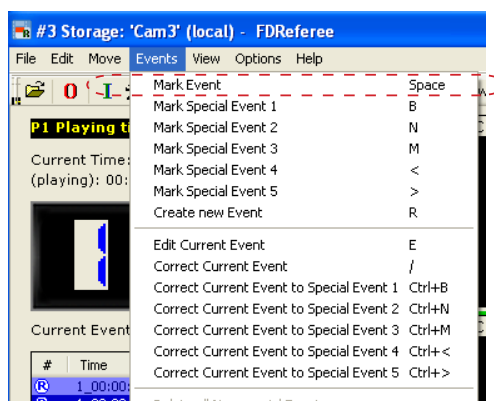
- by pressing Space on the keyboard;



- by clicking the Mark Event button (1) located in the main application window;



- via the Events > Mark Event menu command.





Row with a new event will be added to the table list. Nothing will be specified in the Event Title column because the event was marked without type specification.

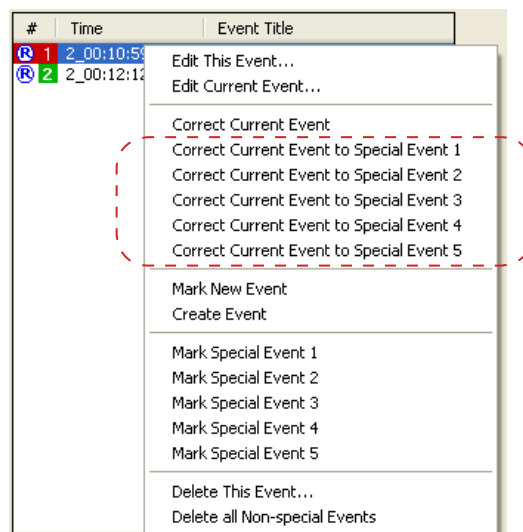
Current Event #7: 00:56:25.02

#	Time	Event Title
1	1_00:00:00.00	Period Start
2	1_00:00:22.11	Violation
3	1_00:01:13.19	Goal
4	01:11:50.08	

2. Editing of the Event

2.1. Editing of the Event Type

If the event is a current one right-click it in the list to edit its type. Select the Correct Current Event to Special Event X command in the context menu, where X is the number of special event type.

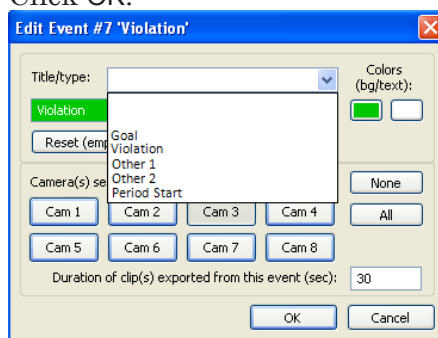


If the event is not the current one you may edit its type in one of the following ways:

- by double-clicking it to mark as a current one. Then edit its type in the above described way (for the current events);
- by right-clicking the event and selecting the Edit This Event... command in the appeared context menu. Then select the type in the Title/Type drop down list of the Edit Event #N window, where N is the number of the event.



Click OK.

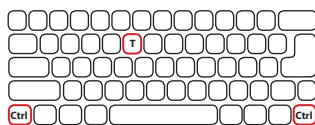


2.2. Editing of the Event Mark Time

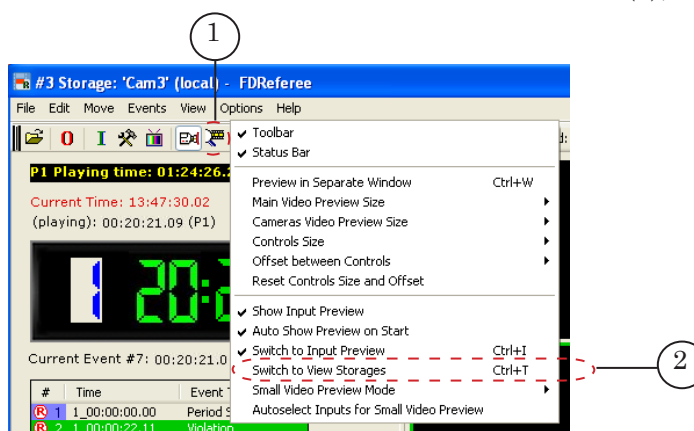
Complete the following steps if it is necessary to edit event mark time:

1. Switch to view storages mode:

- using the Ctrl+T keys;



- using the  button located on the toolbar (1);



- using the View > Switch to View Storages menu command (2).

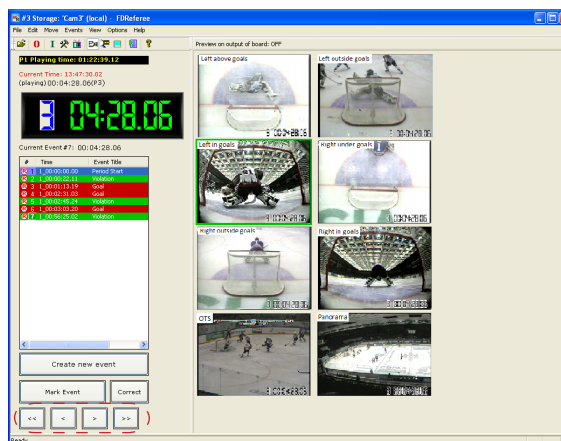
2. Select necessary event in the list by double-clicking it.

3. Frames of the selected event will be displayed in preview windows.

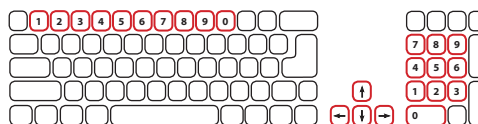
4. Select the moment corresponding to the new event mark by moving on the recorded video material.

Shifting can be implemented (detailed information is given in the table below):

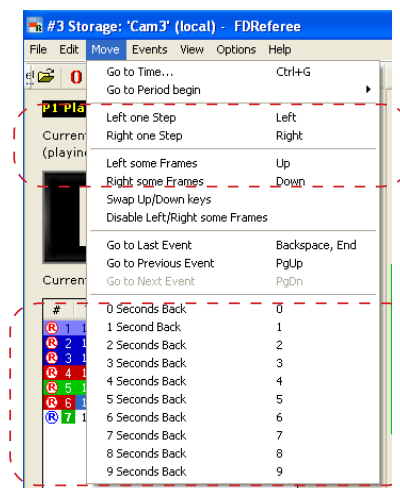
- using the buttons located in the main application window;



- via keyboard keys;



- via the Move menu commands.



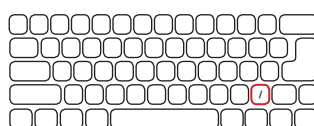
The table below describes the ways of moving on video material.



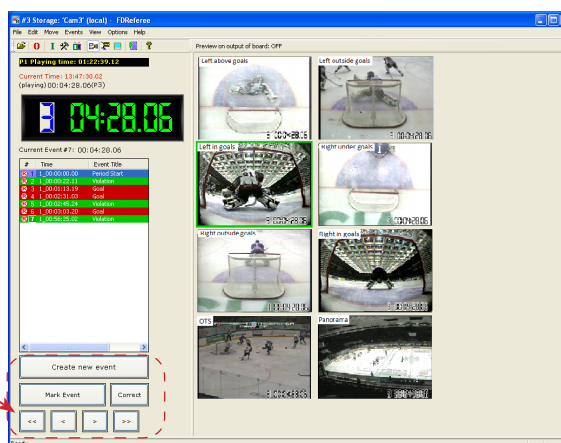
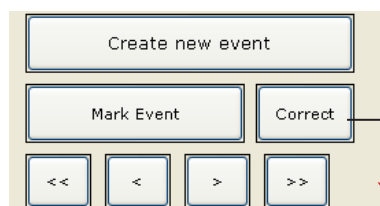
Move menu command	Keyboard key	Button in the main application window	Notes
Left one Step	←	<	Moving one step left/right. Step is equal to 1/2 of frame by default.
Right one Step	→	>	Step is adjusted in the interface configuration window when necessary.
Left some Frames	↑	<<	Moving some frames left/right. Dealing with default settings we have 5-frames moving.
Right some Frames	↓	>>	Number of frames can be varied in the interface configuration window
0 Seconds Back	0		Moving specified number of seconds back. There won't be recurring moving when the button will be pressed again.
1 Second Back	1		For example, when 3 is pressed the frame located 3 seconds back from the event mark will be displayed in preview windows. If 0 is pressed then, another frame (corresponding to event mark) will be displayed.
2 Seconds Back	2		
3 Seconds Back	3		
4 Seconds Back	4		
5 Seconds Back	5		
6 Seconds Back	6		
7 Seconds Back	7		
8 Seconds Back	8		
9 Seconds Back	9		

5. Complete one of the following actions to move event mark to the position selected on the previous step by:

- pressing the «/» key on the keyboard;

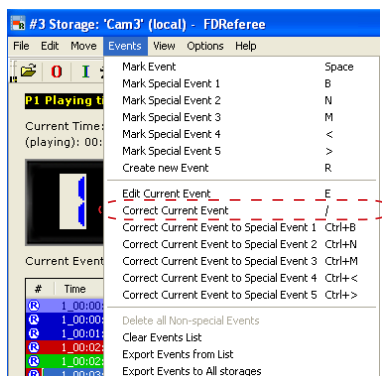


- clicking Correct (6) in the main application window;



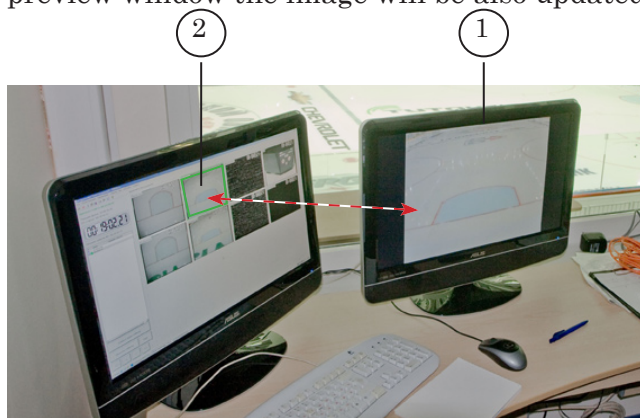


- via the Events > Correct Current Event menu command.



3. Viewing of Event by Video Goal Judge

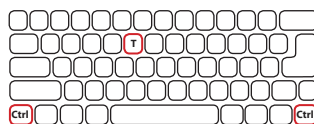
Video goal judge can review marked events in preview windows of the main application window (2) or on the additional monitor. Video material from currently selected preview window will be displayed on this monitor (1). When switching to another preview window the image will be also updated.



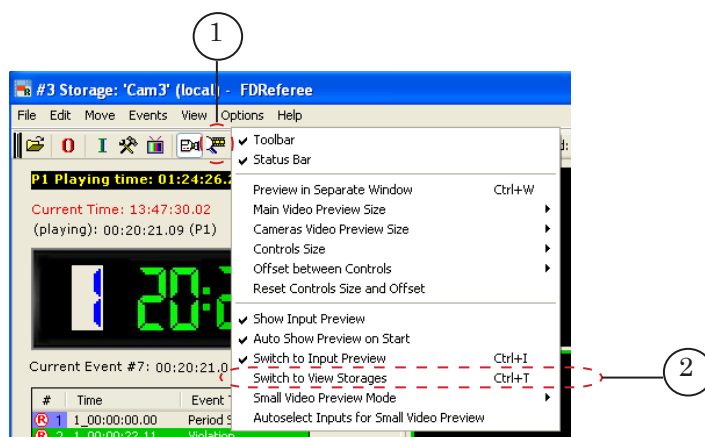
Workflow:

1. Switch to mode of viewing storages:

- using a combination of the Ctrl+T buttons;



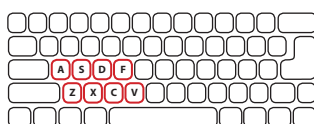
- via the  button located on the toolbar (1);



- via the View > Switch to View Storages menu command (2).
2. Select necessary event in the list by double-clicking it.
 3. Frames with the same time but recorded by different cameras will be displayed in preview windows.
 4. Select preview window which data will be displayed on additional monitor in one of the following ways:
 - by clicking the preview window (in the main application window);
 - by using hot keys of the keyboard:

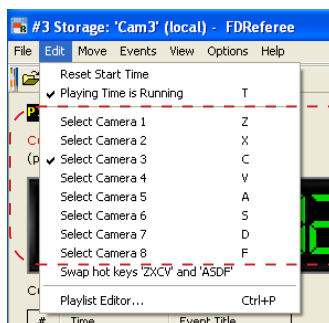
Table 2. Hot Keys

Hot key	Used to select...
Z	Camera 1
X	Camera 2
C	Camera 3
V	Camera 4
A	Camera 5
S	Camera 6
D	Camera 7
F	Camera 8

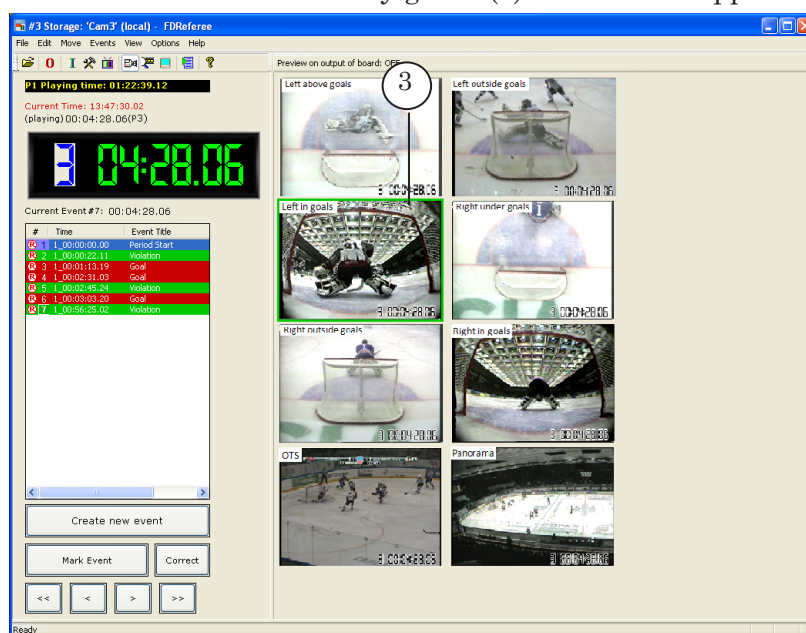




- by using commands of the Edit menu.

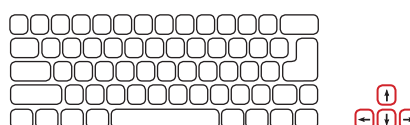


Preview window corresponding to the selected camera will be marked by green (3) in the main application window.







5. Use one of the following ways to scroll recorded video forward/back (the image will be scrolled in all preview windows simultaneously):

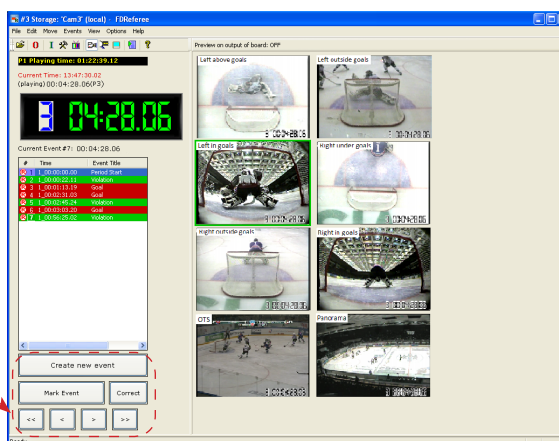
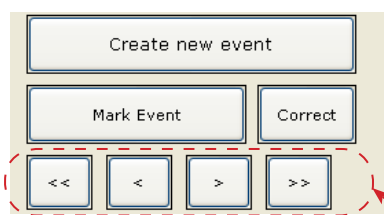
- using keyboard keys:
 - – right 1 step;
 - ← – left 1 step;
 - ↑ – right some frames;
 - ↓ – left some frames;





- using the buttons located in the main application window:

-  – right 1 step;
-  – left 1 step;
-  – right some frames;
-  – left some frames.

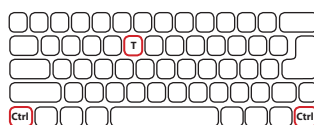


4. Adding of the Event Mark to Recorded Material

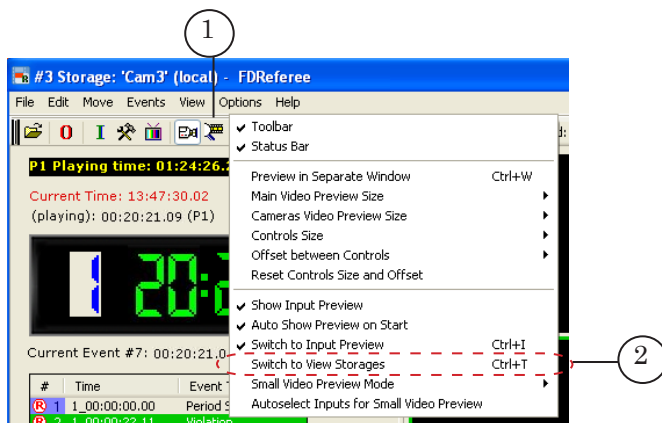
Sometimes when period of the match is finished it may occur that some event wasn't marked. In this case video goal judge can view recording material, find necessary unmarked moment and asks operator to mark event.

Workflow:

1. Switch to viewing video from storage in one of the following ways:
 - by using the Ctrl+T buttons;

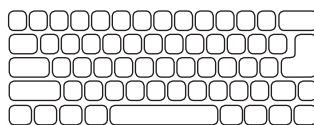


- via the  button located on the toolbar (1);



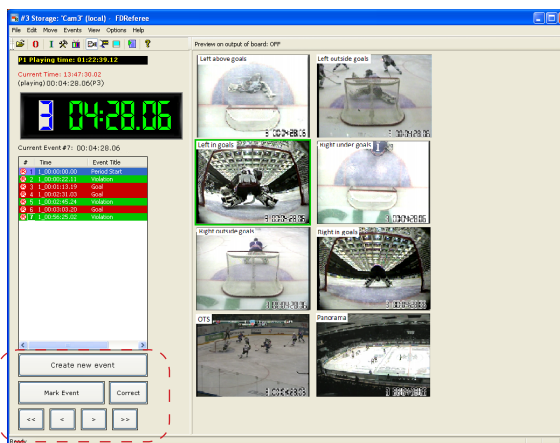
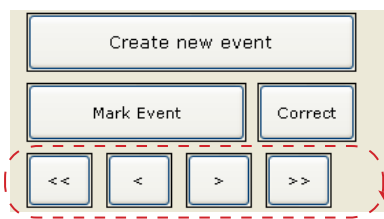
- via the View > Switch to View Storages menu command (2).
2. Move on recorded material in storages select the event for being marked in one of the following ways:

- by pacing (in case when time is unknown):
 - via keyboard keys:
 - – right 1 step;
 - ← – left 1 step;
 - ↑ – right some frames;
 - ↓ – left some frames;



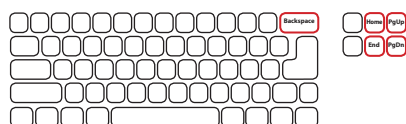
- via the buttons located in the main application window:

- > – right 1 step;
- < – left 1 step;
- >> – right some frames;
- << – left some frames;

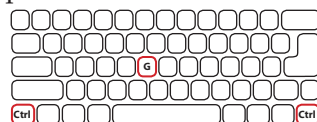




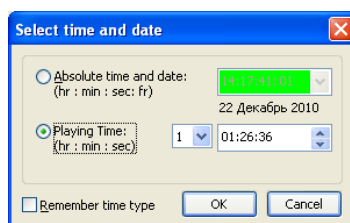
- moving to the period start via the Move > Go to Period Begin menu command;
- moving using a table with the list:
 - double-click corresponding field in the table;
 - PgUp is used to move to the previous event in the list and to select it as the current one;
 - PgDn is used to move to the next event in the list and to select it as the current one;
 - Backspace, End are used to move to the last event in the list and to select it as the current one;



- moving to the specified time:
 1. Select the Move > Go to Time... menu command or press the Ctrl+G combination.



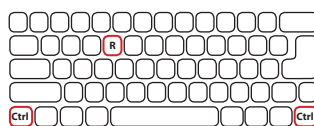
2. Specify the time where you want to move. Then click OK.



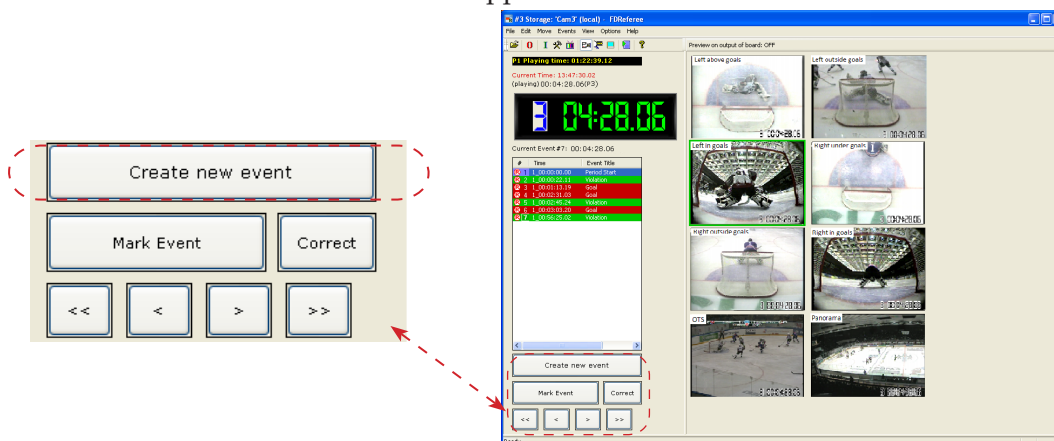


3. When necessary moment was specified create a new event in one of the following ways:

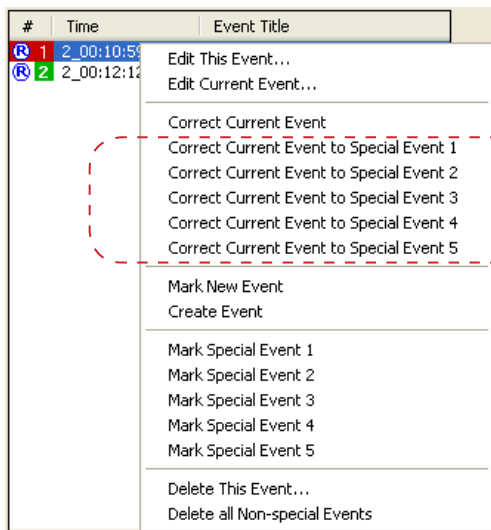
- using the Ctrl+R combination;



- using the Create new event button located in the main application window.



4. New but untyped event will be added to the list.
5. Right-click the event and select the Edit Current Event X (X denotes number of the event type) command in the appeared window to specify the type.






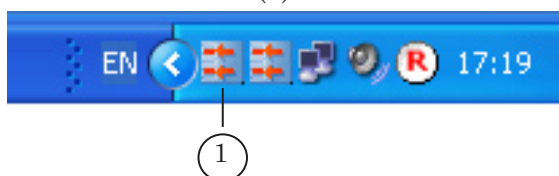
Operator Actions at the End of the Match

1. Stop of Match Video Recording

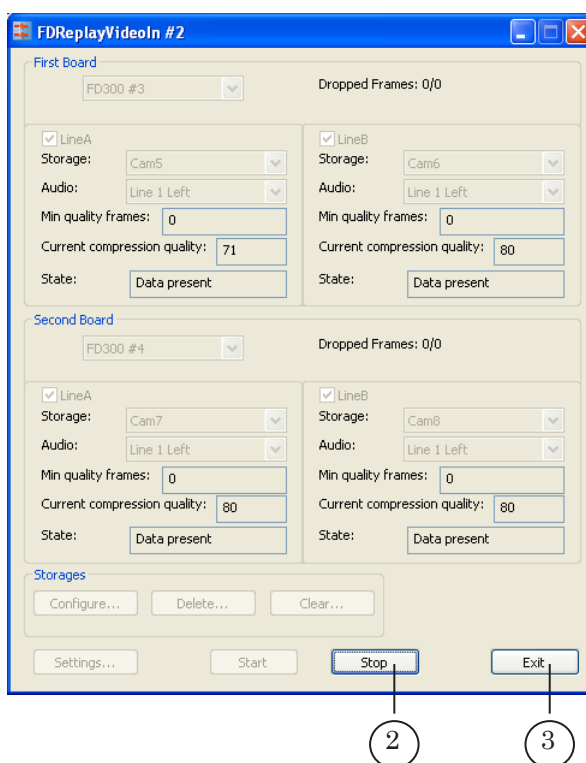
To stop process of match recording you should stop the FDRplayVideoIn #1 and FDRplayVideoIn #2 applications.


Workflow:

1. Click the  icon (1) in the taskbar notification area.



2. Click Stop (2) in the appeared window.



3. Click Exit (3). The window will be closed.
4. Repeat actions 1–3 for the second program instance using the rest of the  icons in the taskbar notification area.



2. Creation of Video Report

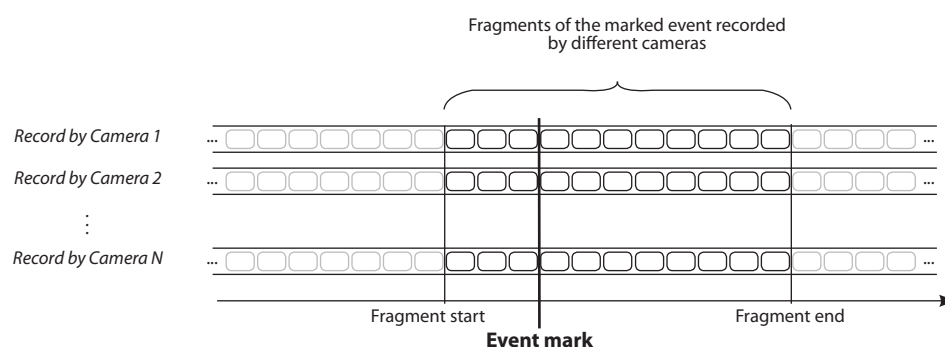
2.1. General Information



Tip: We recommend creating video report directly after the match has finished.

Video report is a set of AVI files with recorded fragments of the match. The fragments correspond to marked events.

Every marked event is assigned to several different fragments recorded by every camera.



All fragments have equal duration by default. User specifies start and end of the fragment relatively event mark location. Duration of every fragment can be adjusted by changing its start and/or end.

There is a possibility of creating a complete or a selective video report:

- complete report is the report that includes all fragments of all marked during the match events;
- selective report is the report that includes selected fragments of the selected events.

You may output fragments in the following ways:

- every fragment is output into a separate video file;
- all fragments are output into one video file.

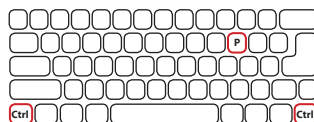


2.2. Playlist Window

Configuration and control over video report are implemented in the Playlist window.

You may open the window in one of the following ways:

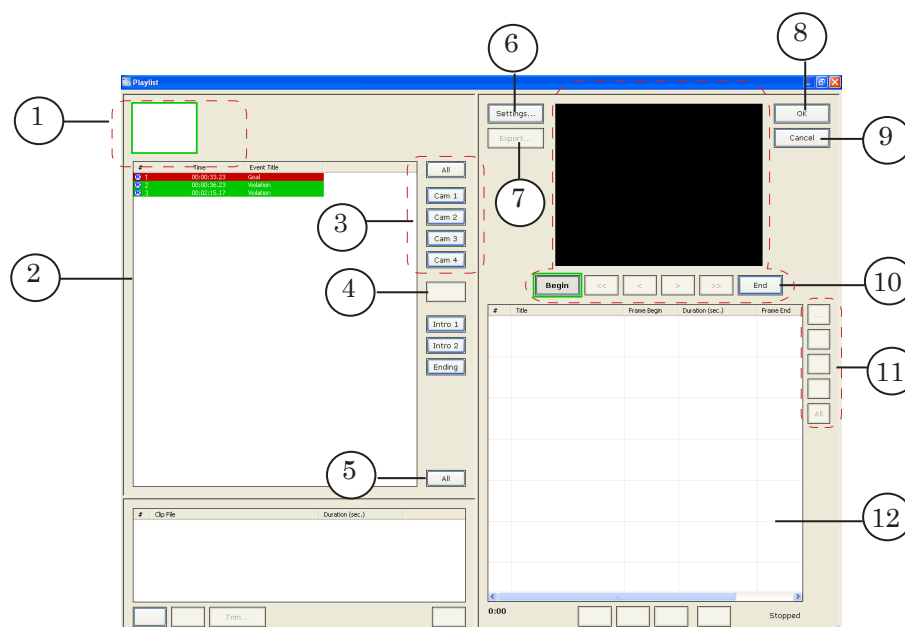
- via the Edit > Edit Playlist... menu command;
- via the Ctrl+P hot keys;



- via the  button located on the toolbar.






The following elements are located in the Playlist window:

- the list of events marked during record of the match (2);



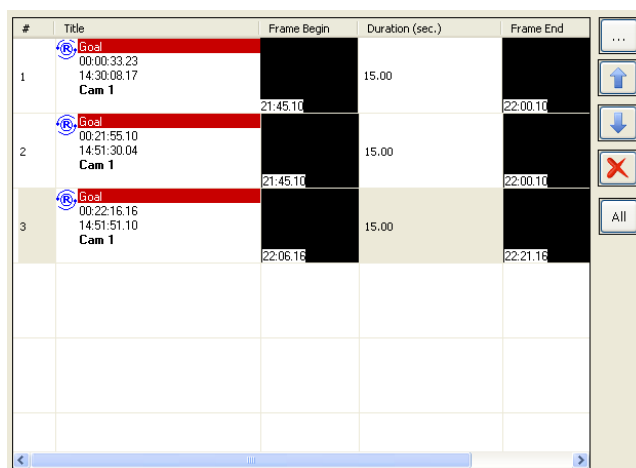
- preview windows to display frames of the selected event that were recorded by different cameras (1) (number of windows corresponds the number of cameras);
- the All button (5) to select all events in the list;
- the Cam 1 – Cam N buttons (N is number of cameras) (3) to select fragments of one or several events recorded by corresponding cameras;
- the (4) button is used for adding of the selected event fragments to the list with video report fragments (12);
- table with a list of fragments selected for output into the video report (12) (for detailed information, see section 2.3.);
- buttons for editing of video fragments list (11):



-  is used to open the window for adjusting parameters of the selected fragment;
-  and  are used to move selected items up or down;
-  is used to delete selected items from the list;
-  is used to select all items in the list;
- elements to adjust borders of fragment selected in the list (12) (for more information, see section 2.6.);
- the Settings... button (6) is used to configure general fragments settings;
- the Export... button (7) is used to export fragments included to the video report list (12) to AVI files;
- the OK button (8) is used to close the Playlist window with saving of changes that were made. When the window will be opened again all configured setting of the playlist that were made during the previous session will be available;
- the Cancel button (9) is used to close the Playlist window without saving of configured settings.

2.3. Table with the List of Video Report Fragments

A list of video report fragments is displayed in the form of the table in the Playlist window.



#	Title	Frame Begin	Duration (sec.)	Frame End
1	Goal 00:00:33.23 14:30:08.17 Cam 1	21:45:10	15.00	22:00:10
2	Goal 00:21:55.10 14:51:30.04 Cam 1	21:45:10	15.00	22:00:10
3	Goal 00:22:16.16 14:51:51.10 Cam 1	22:06:16	15.00	22:21:16

Number of rows in the table corresponds the number of fragments added to the video report list. The following information is displayed in the table:

- # is index of the fragment;
- Title is the information on the event (its type, playing and daily time) and the title of the camera that recorded this fragment;
- Frame Begin displays the first fragment frame;



- Duration (sec.) displays duration of the fragment;
- Frame End displays the last fragment frame.

2.4. Complete Video Report Output (All Events, All Fragments)

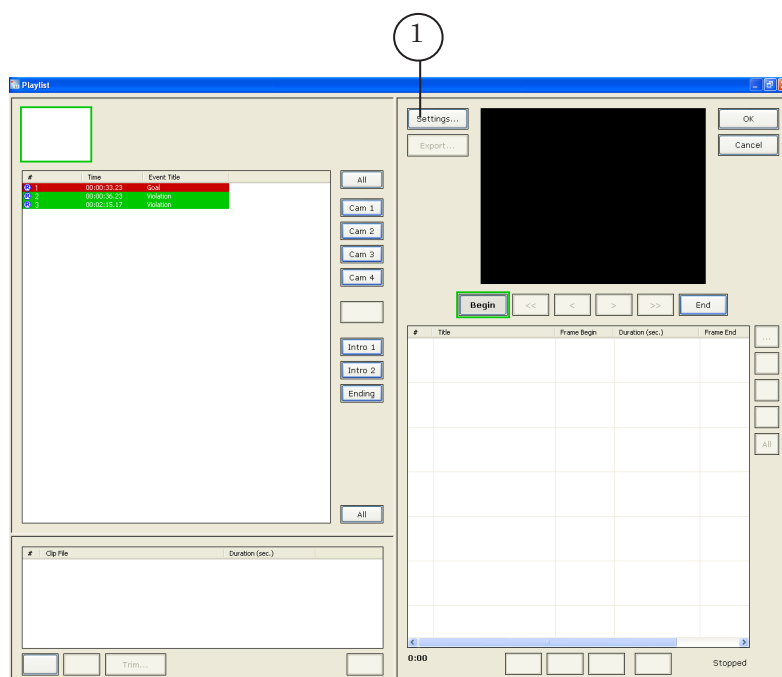
This section describes creation of video report when all fragments recorded by all cameras are included in it (complete video report).

✓ **Important:** Sometimes complete video report includes fragments that are not of great importance.

For example, the most important fragments of the Goal event are those recorded by cameras located near the goal where the puck was scored. Video report files with the same fragments but recorded by oppositely located cameras are usually not valuable.

Workflow:

1. Open the Playlist window using the Edit > Edit Playlist... menu command (for other ways of the Playlist window activation, see section 2.2.).

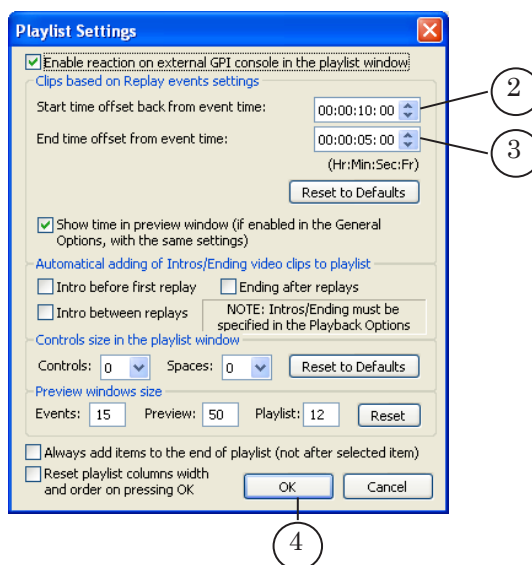


If table for fragments includes a list of fragments that were marked, for example, during the previous program session, you should clear the table before creating video report of a new match. For detailed information on this issue, see step 11 below.

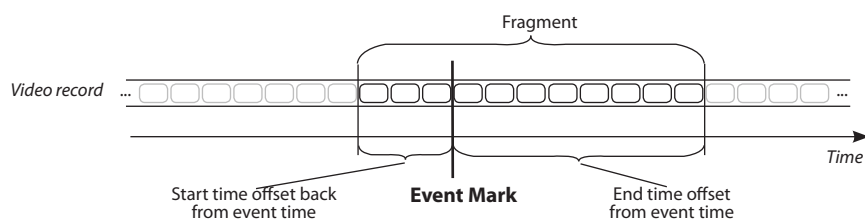
2. Adjust duration of fragments included into video report by completing the following steps:



1. Click Settings... (1). The Playlist Settings window appears.

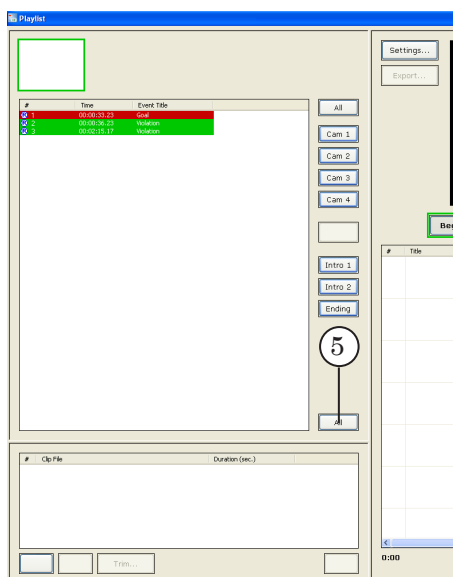


2. Specify time offset from the event mark time in the Start time offset back from event time field (2).

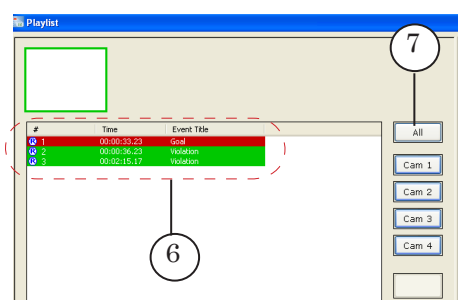


3. Specify time offset from event time in the End time offset from event time field (3).

✓ **Important:** Let we specified start time offset back from event time 10 seconds and end time offset from event time 5 seconds. At adding of the event to the list with fragments there will be created a new fragment. Its duration will be 15 seconds with 10 seconds before event takes place and 5 seconds after its occurrence.

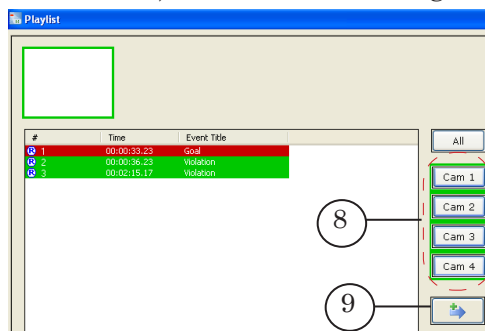


All events will be marked (6).




4. Click All (7) to select all cameras.

In this case the Cam1 – Cam N buttons (N denotes number of the camera) will be outlined in green (8).

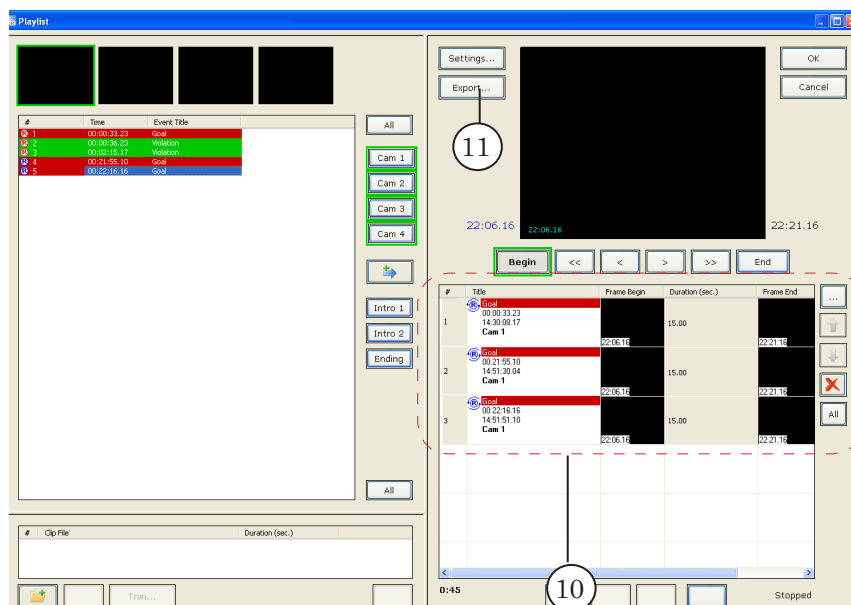


Recurrent clicking the All button results into deselecting of selected events.

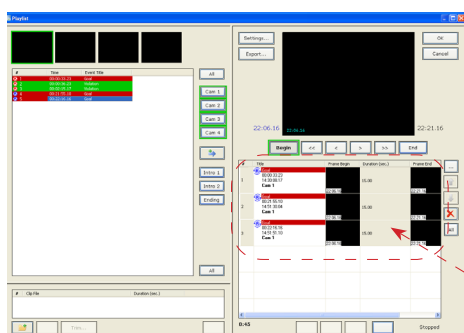
5. Click the  button (9) to add fragments into the list of video report fragments.



Information on added fragments will be displayed in the table (10).



- When adding fragments to the table they will be automatically selected for being exported into video files. It will be marked by grey filling in the # (a) and Duration (sec.) (b) columns.



#	Title	Frame Begin	Duration (sec.)	Frame End	
1	Goal 00:00:33.23 14:30:08.17 Cam 1	22:06:16	15.00	22:21:16	...
2	Goal 00:21:55.10 14:51:30.04 Cam 1	22:06:16	15.00	22:21:16	...
3	Goal 00:22:16.16 14:51:51.10 Cam 1	22:06:16	15.00	22:21:16	...

Diagram labels: 'a' points to the # column, 'b' points to the Duration (sec.) column, and 'c' points to the right-side action buttons.



If to right-click one of the strings in the table all fragments will be deselected except the clicked one. Click All (c) to select all fragments if necessary.

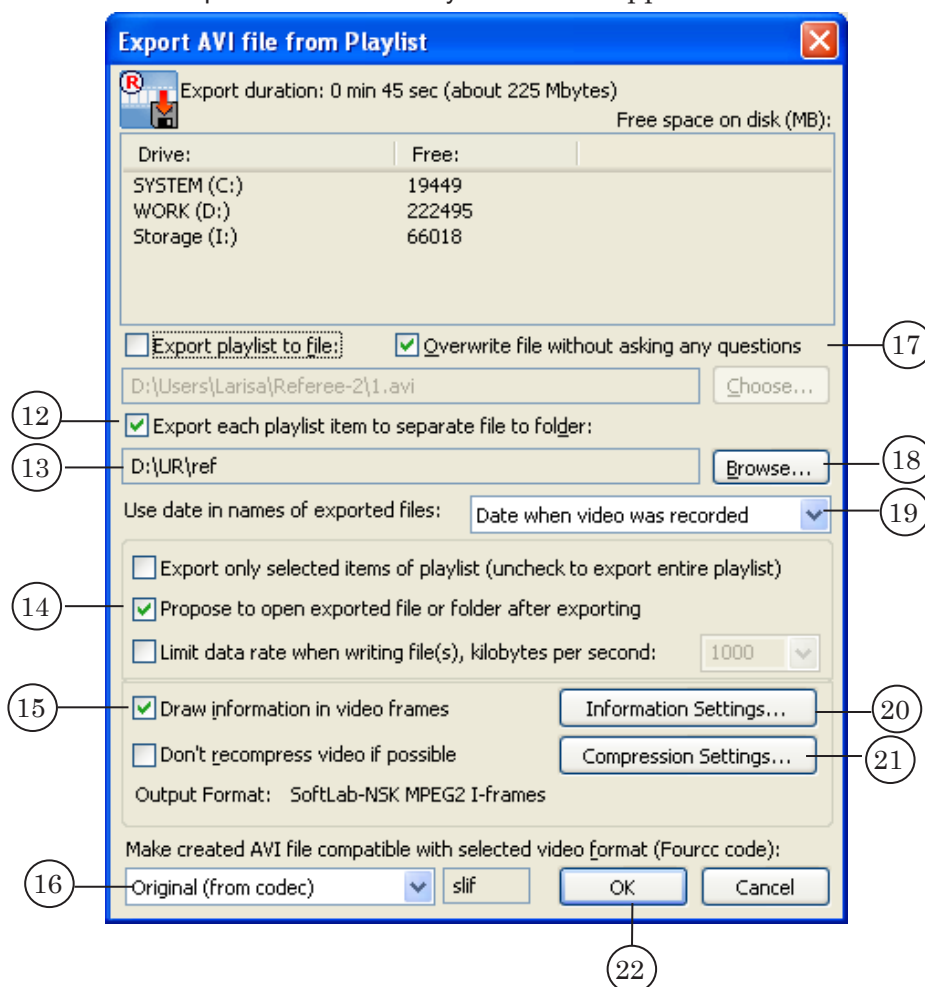
Edit fragments list via the buttons:

- and are used to move selected items up/down;
- is used to delete selected items from the list;
- is used to select all items in the list.

Instruction on editing of separate fragments you may find in section 2.6.

7. Click Export... (11).

The Export AVI file from Playlist window appears.



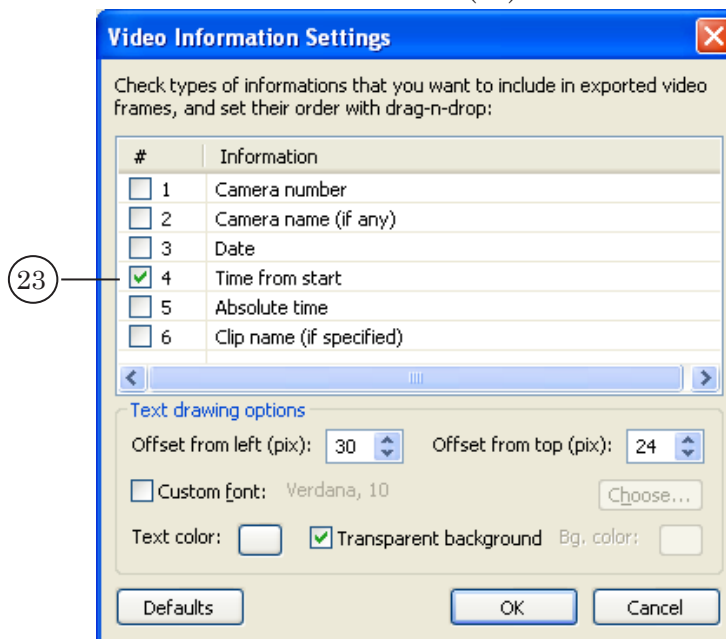
8. We recommended to do the following in the Export AVI file from Playlist window:

1. Put the marks:

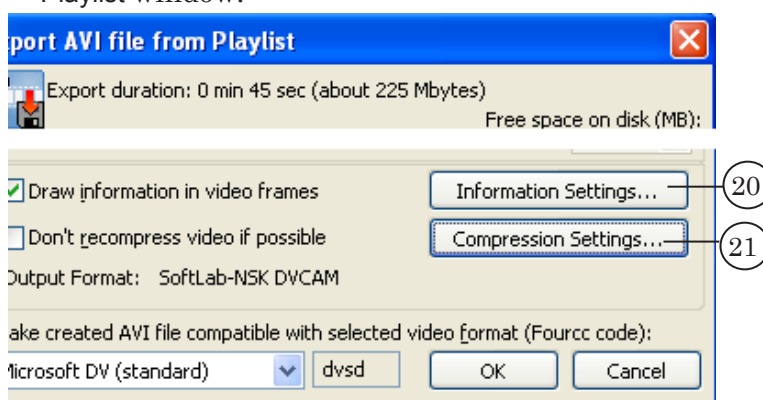
- Overwrite file without asking any questions (17);
- Export each playlist item to separate file to folder (12);
- Propose to open exported file or folder after exporting (14);
- Draw information in video frames (15).



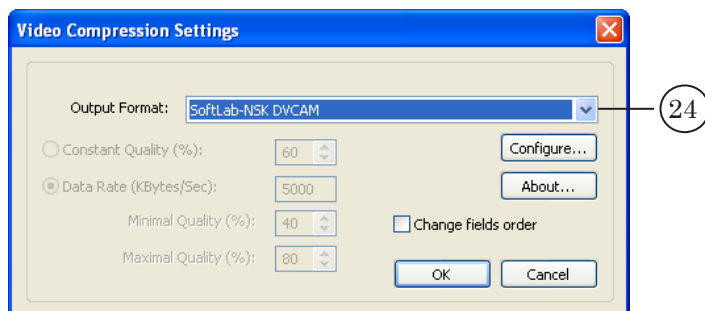
- All other marks must be off (see the picture above).
2. Click **Browse...** (18).
Specify a folder to output video report files. Then click **OK**.
Specified path will be displayed in the (13) field.
 3. Select data for adding to the file name in the **Use date** in names of exported files list (19).
 4. Click **Information Settings...** (20). The **Video Information Settings** window appears.
Put the **Time from start** mark (23).



- Close the **Video Information Settings** window by clicking **OK**.
5. Click **Compression Settings...** (21) in the **Export AVI file from Playlist** window.

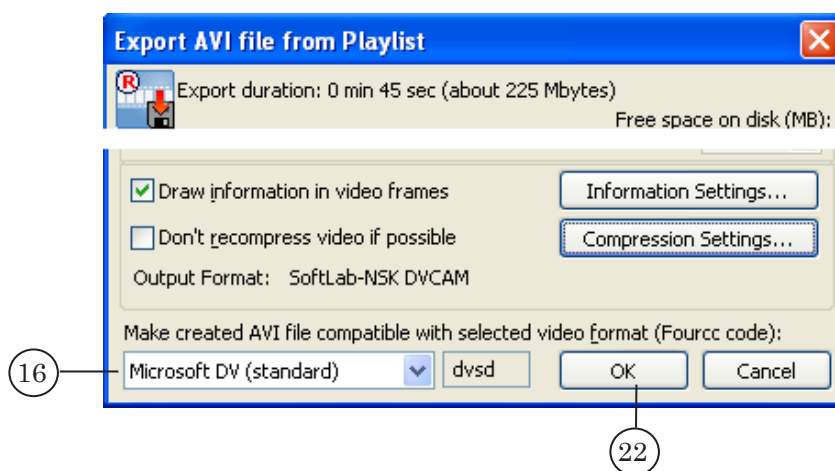


The **Video Compression Settings** window appears.



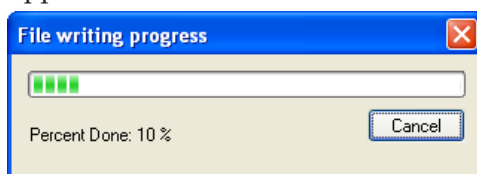
Select SoftLab-NSK DVCAM in the Output Format list (24). Then click Ok to close the window.

6. Select the Microsoft DV (standard) format in the Make created AVI file compatible with selected video format (Fourcc code) list (16).

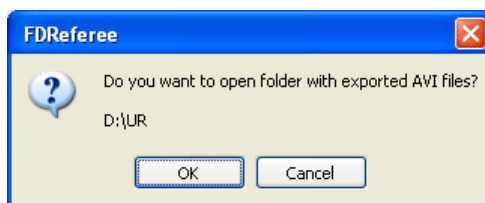


9. Click OK (22) in the Export AVI file from Playlist window.

Export of fragments to AVI files starts. Progress bar appears.



10. Window with the following request appears.





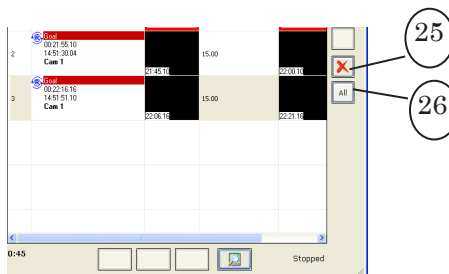
Click OK if you need to open the folder, in other case – click Cancel.

11. Fragments list won't be automatically cleared after AVI exporting.

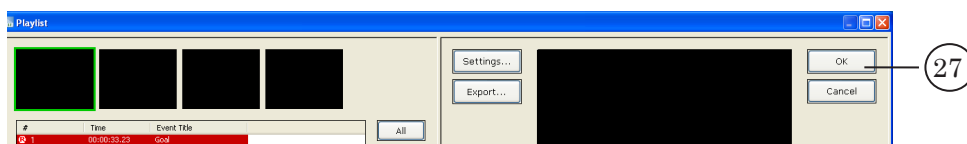


Complete the following actions to clear the list if necessary:

1. Click  (26).
2. Then click  (25).



12. Close the Playlist window by clicking Ok (27).

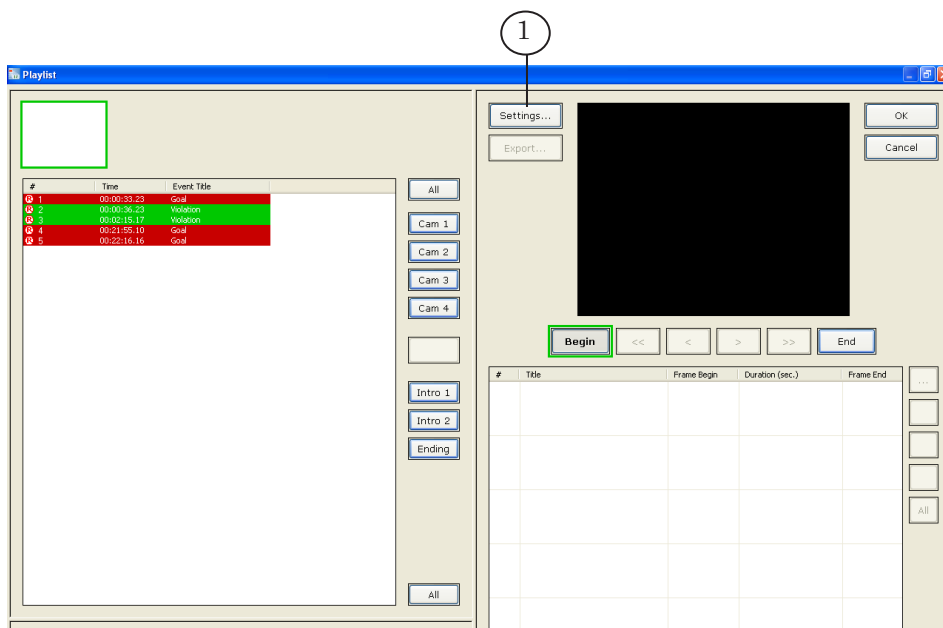


2.5. Selective Video Report Output

This section describes creation of video report that includes only some fragments specified by the user (selective video report).

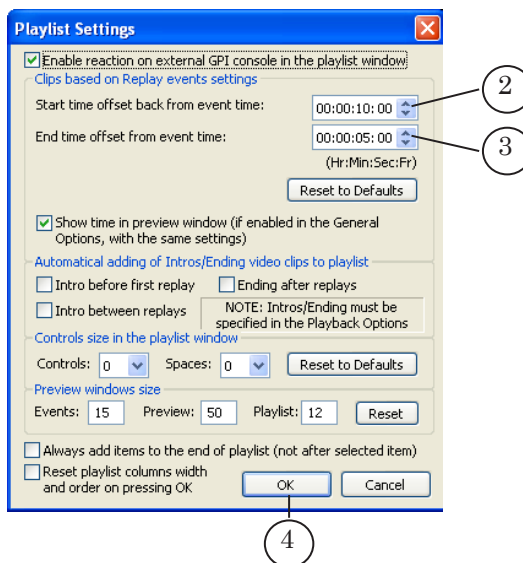
Workflow:

1. Open the Playlist window using the Edit > Playlist Editor... menu command (for other ways of the Playlist window activation, see section 2.2.).



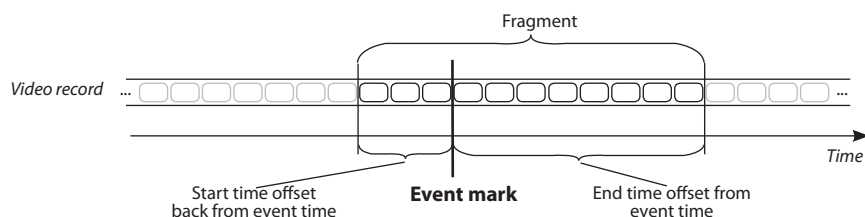


2. Click Settings... (1). The Playlist Settings window appears.

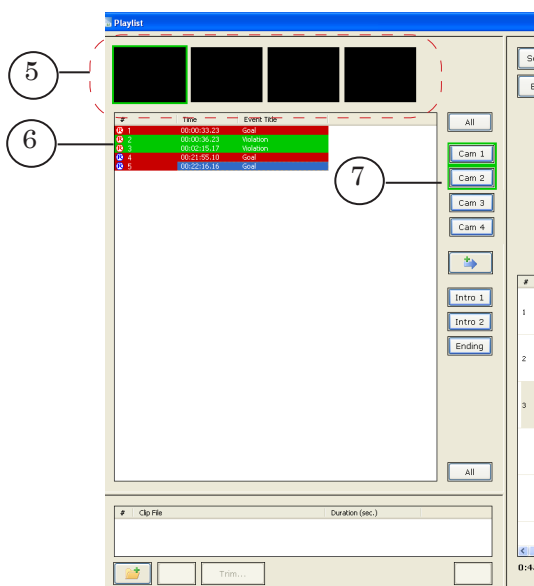



3. Specify duration of fragments in the Playlist Settings window by completing the following steps:

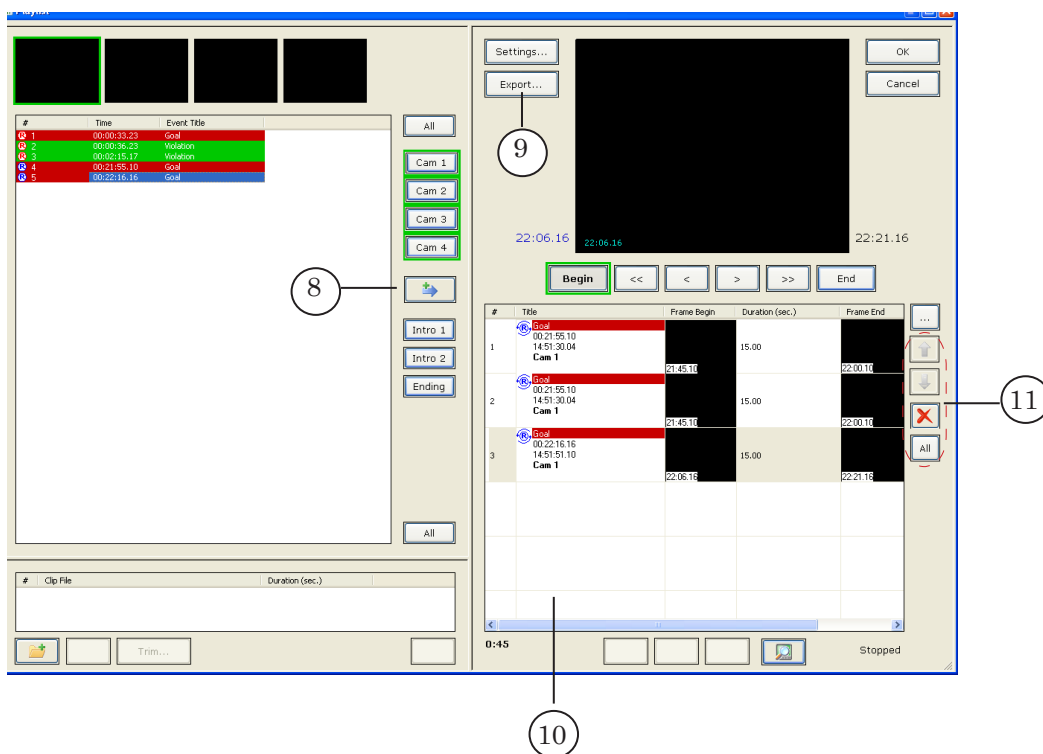
1. Specify offset back in the Start time offset back from start event field (2).







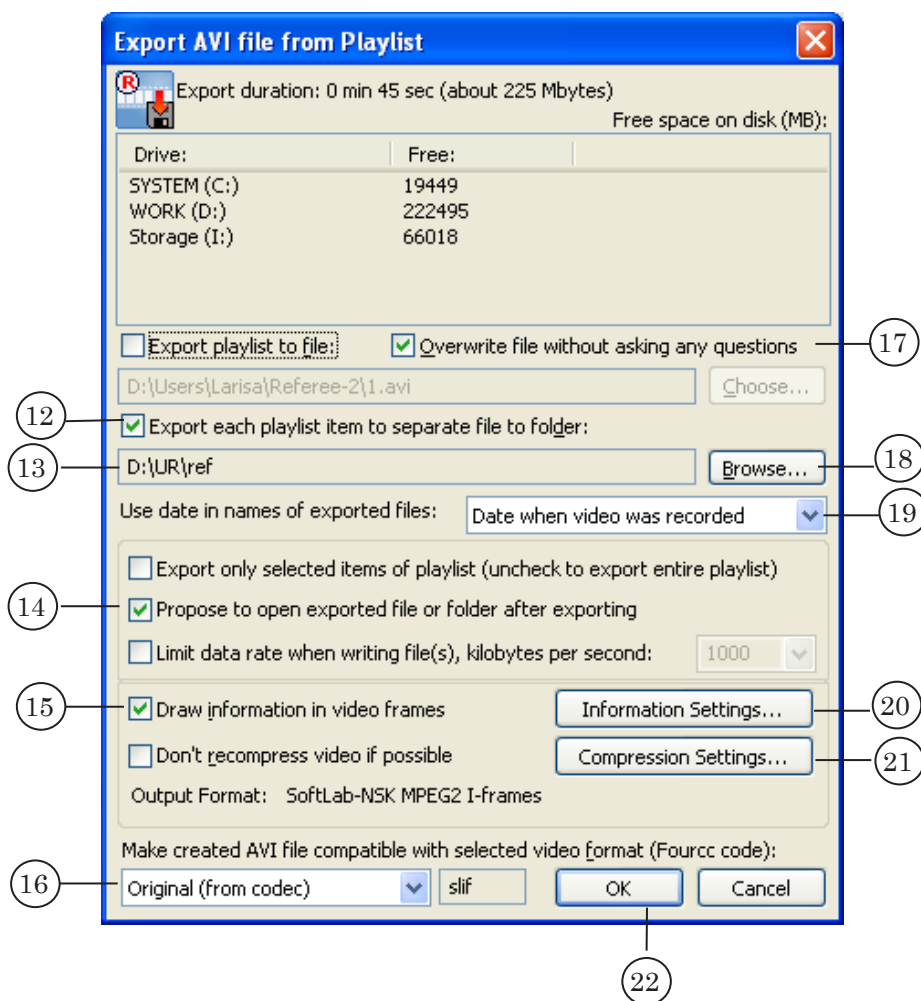
2. Specify offset forward in the End time offset from event time field (3).
3. Click OK (4) to close the Playlist Settings window.
4. Select the event by clicking it in the Playlist window (6).



5. Specify what records of the selected event should be added into report in one of the following ways:
 - click the Cam. X button (7) (X denotes camera number). The button will be outlined in green. Recurring clicking the button results into fragment deselection. Green outline of the Cam. X button (X denotes camera number) disappears.
 - click preview window (5) of the specified camera. The appropriate button will be outlined in green (7). Repeat clicking the window results into deselection of the fragment. Green outline of the Cam. X button (X denotes camera number) disappears.
6. Click the  button (8) to add selected fragments to the list. Information on added fragments is displayed in the table (10).



7. Repeat steps 3–5 to add all necessary fragments to the video report list.
8. Edit fragments list when necessary by using the following buttons (11):
 -  and  are used to shift selected elements up and down;
 -  is used to delete selected elements from the list;
 -  is used to select all elements in the list.To edit borders of necessary fragments, see section 2.6.
9. Click Export... (9). The Export AVI file from Playlist window appears.



10. It is recommended to complete the following in the Export AVI file from Playlist window:

1. Put the marks:

- Overwrite file without asking any questions (17);
- Export each playlist item to separate file to folder (12);
- Propose to open exported file or folder after exporting (14);
- Draw information in video frames (15).

Other marks must be off (see the picture above).

2. Click Browse... (18).

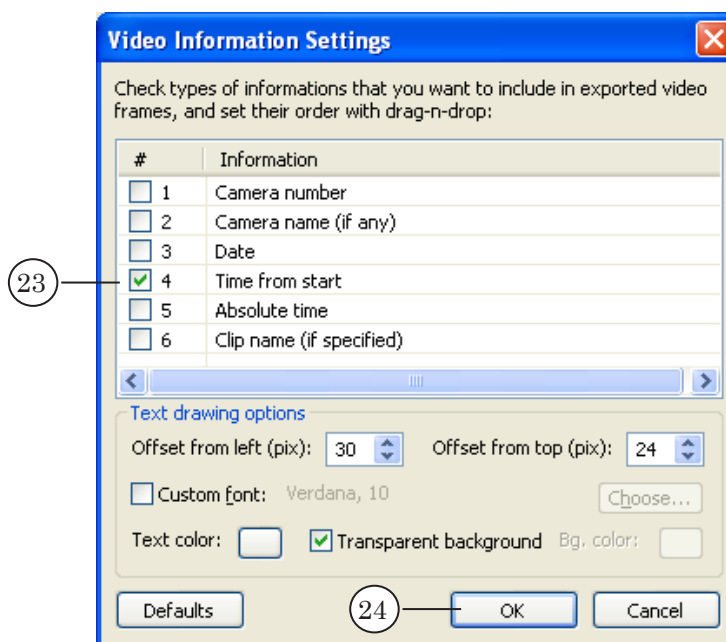
Specify a folder to output video report files in the appeared window. Then click OK.

Specified path will be displayed in the (13) field.

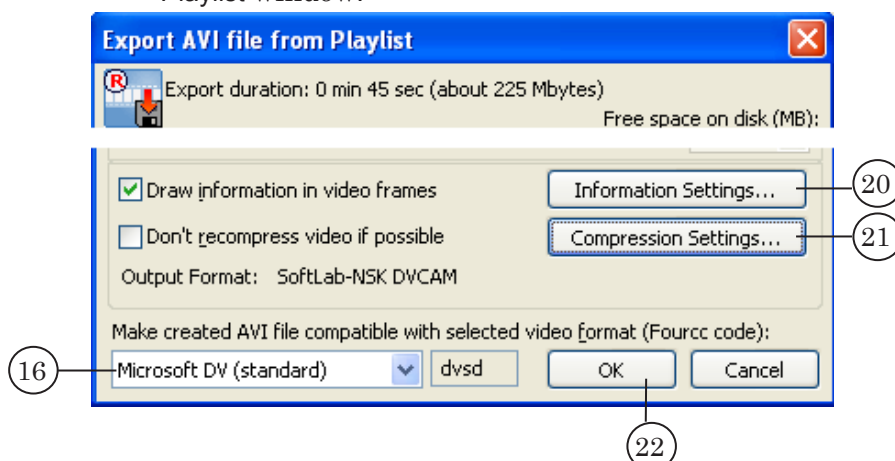
3. Select data for adding to the file name in the Use date in names of exported files list (19);

4. Click Information Settings... (20). The Video Information Settings window appears.

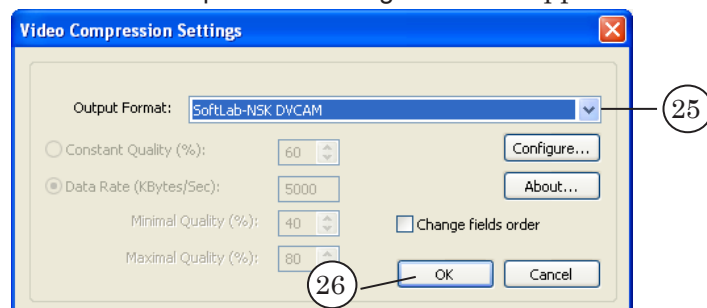
Put the Time from start mark (23).



Close the Video Information Settings window by clicking OK (24).
5. Click Compression Settings... (21) in the Export AVI file from Playlist window.



The Video Compression Settings window appears.

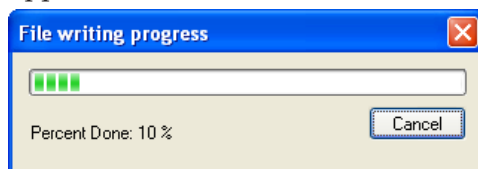


Select SoftLab-NSK DVCAM in the Output Format list (25).
Close the window by clicking OK (26).

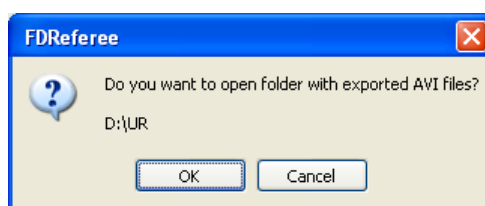


6. Select the Microsoft DV (standard) format in the Make created AVI file compatible with selected video format (Fourcc code) list (16) of the Export AVI file from Playlist window.
11. Click OK (22) in the Export AVI file from Playlist window.

Export of fragments to AVI files starts. Progress bar appears.





12. The following window appears.

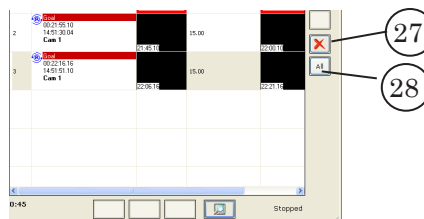


Click OK if you need to open the folder, in other case click Cancel.

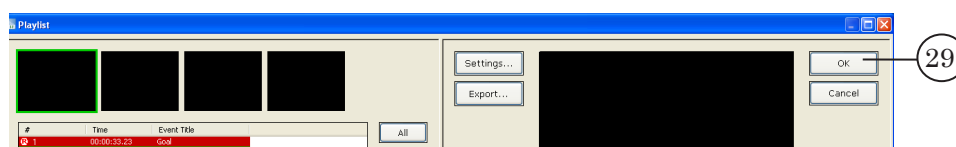
13. Fragments list won't be automatically deleted after exporting.

Complete the following actions to clear the list :

1. Click  (28).
2. Then click  (27).



14. Close the Playlist window by clicking OK (29).



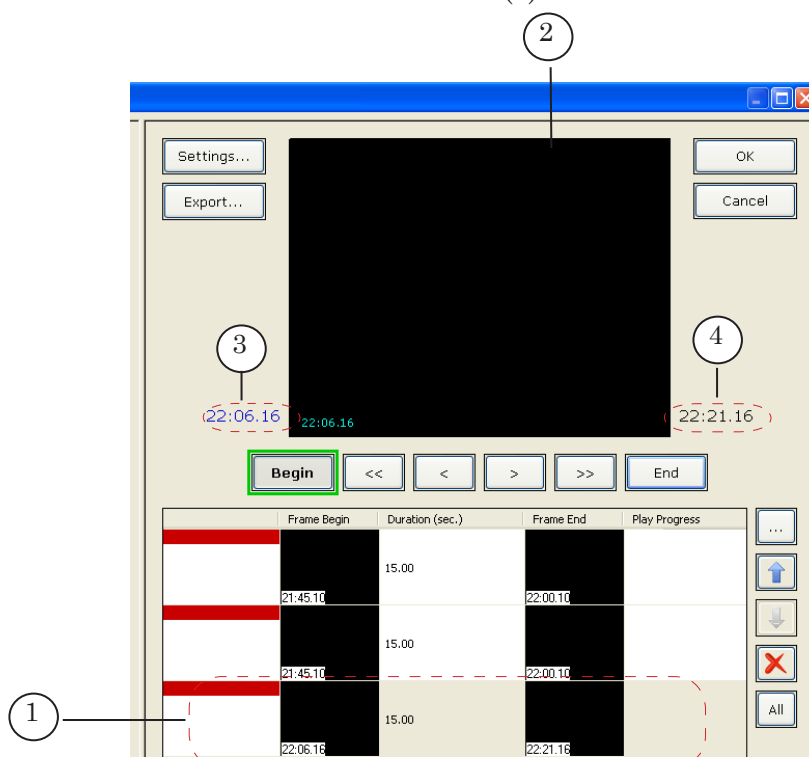


2.6. Editing of Video Fragments Borders

After adding of fragments to video report list they all have equal duration. The application provides a possibility of adjusting duration of each fragment.

General workflow:

1. Select a fragment by clicking it in the table with the fragments list (1).
Frame of the selected fragment will be displayed in the preview window (2).
Time of the first fragment frame will be displayed in the (3) field and of the last frame in the (4) field.

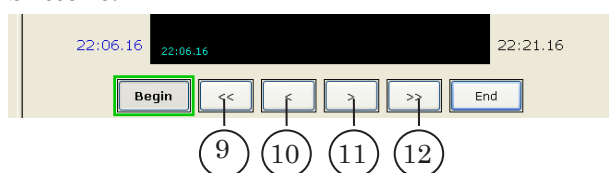


2. Select adjustable fragment border (start/end). Button assigned to the selected border (Begin (5)/ End (7)) will be outlined by green; the first/last frame of the fragment will be displayed in the preview window (2). Complete one of the following actions to specify «Begin»:
 - click the Begin button (5);
 - click Frame Begin in the row with the selected fragment.



Complete one of the following actions to edit «End»:

- click End (7). The button will be outlined in green. The last frame of the fragment will be displayed in the preview window (2);
 - click in the Frame End (8) field in the row with the selected fragment.
3. Select the frame that is necessary to specify as the begin/end by moving on video material via the (9)–(12) buttons.



The 9 – 12 buttons for moving on video material:


- (9) – left some frames;
- (10) – left one step;
- (11) – right one step;
- (12) – right some frames.

Corresponding frames will be displayed in preview window (2) when moving on video material.



3. Finish Working with the Application

The application can be closed in one of the following ways:

- using the File > Exit menu command;
- using the  button located on the application toolbar.

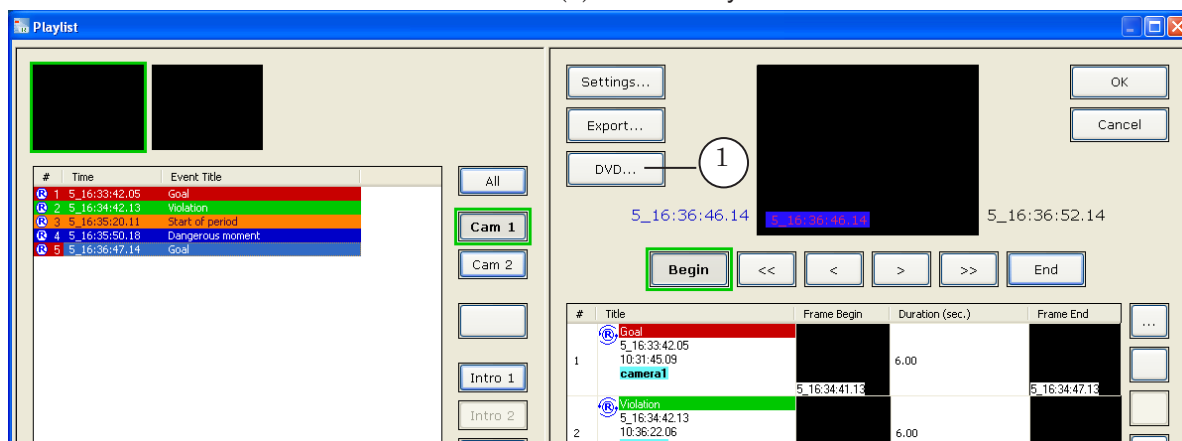


3. Recording of Video Report to DVD

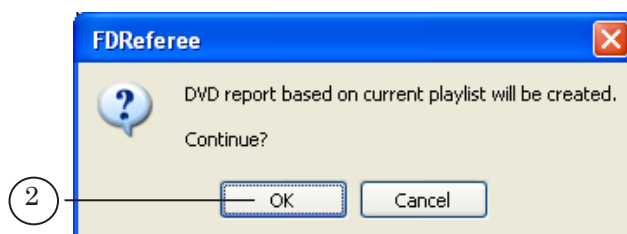
Recording of video report to DVD is implementing in the Playlist window. First create a list of fragments to be output into a video report.

Workflow:

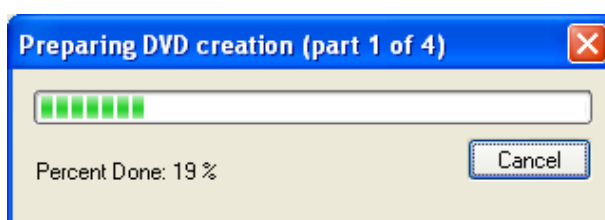
1. Click DVD... (1) in the Playlist window.



2. The following window appears. Click OK (2) to continue working.

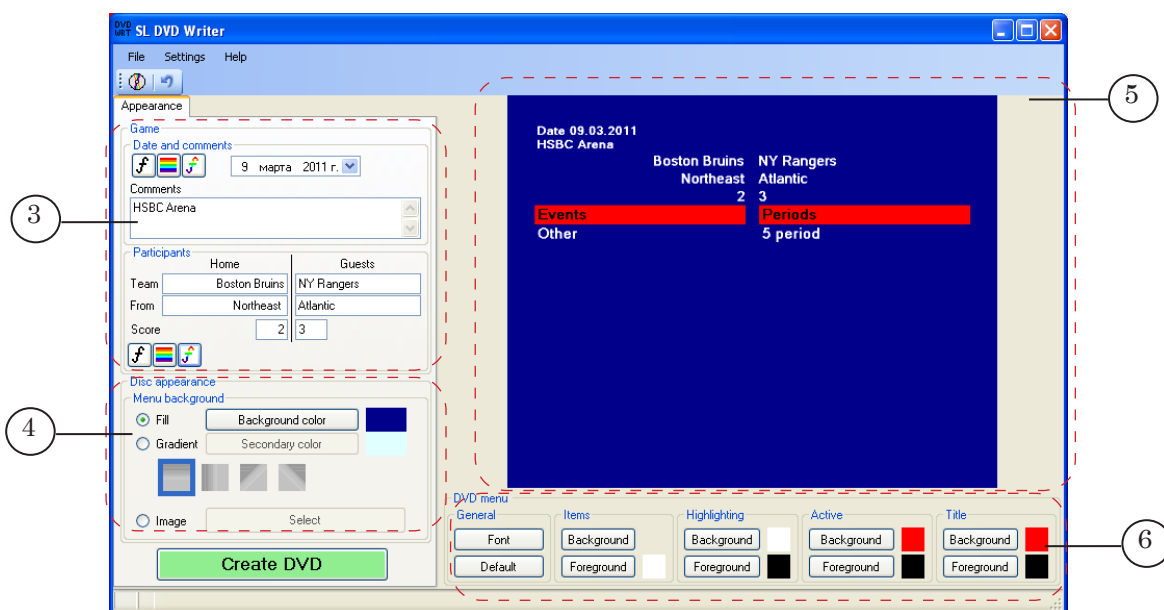


3. The Preparing DVD creation window will be opened.





4. The SL DVD Writer window appears then.

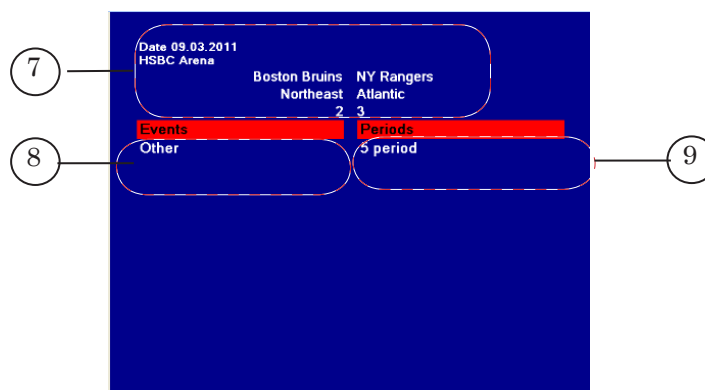


The following elements are located in this window:

- elements of the Game group (3) are used to input information on the game (names of the teams, place of competition etc.) and to control displaying of this data in the main DVD menu;
- elements of the Disc appearance group (4) are used to configure a background of DVD menu;
- window for displaying of made configurations of DVD menu (5);
- elements of the DVD menu group (6) are used for configuring of DVD menu options.

The following information is displayed in the main DVD menu:

- information on the game (7) (user-specified);
- menu options that are created automatically with the information about game fragments selected for being recorded on the DVD:
 - list of events (8);
 - list of periods (9).








5. At opening the window data entered during the previous program session will be displayed in the Game group fields.

Enter information on the current game:

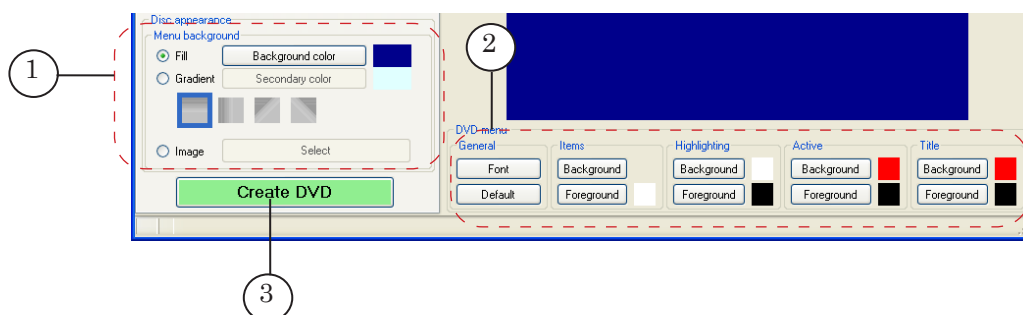
- in the Date and comments group (1):
 - click (2) to change date of the game by selecting it in the appeared window;
 - information on place of the match in the (3) field.
- information in the Participants group (4) is divided into 2 columns: Home (5) (information on a home team) and Guests (6) (information on a guest team):
 - name of the team in the Team field (7);
 - name of the city in the From field (8);
 - Score (9) denotes a number of scored goals by the team.

Design of the text can be specified by the following buttons:

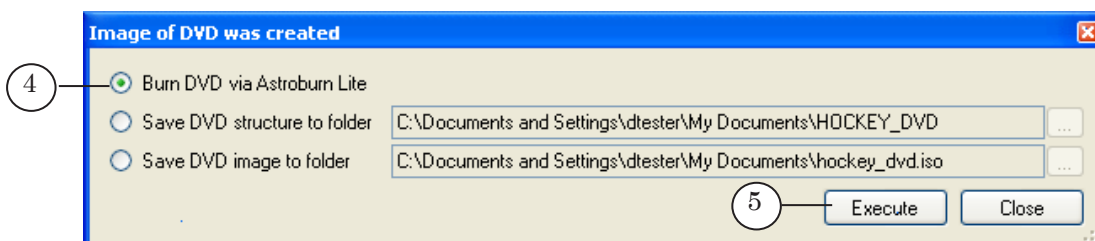
-  is used to specify the name, style and size of a font;
-  is used to specify color of a background;
-  is used to specify color of a font.



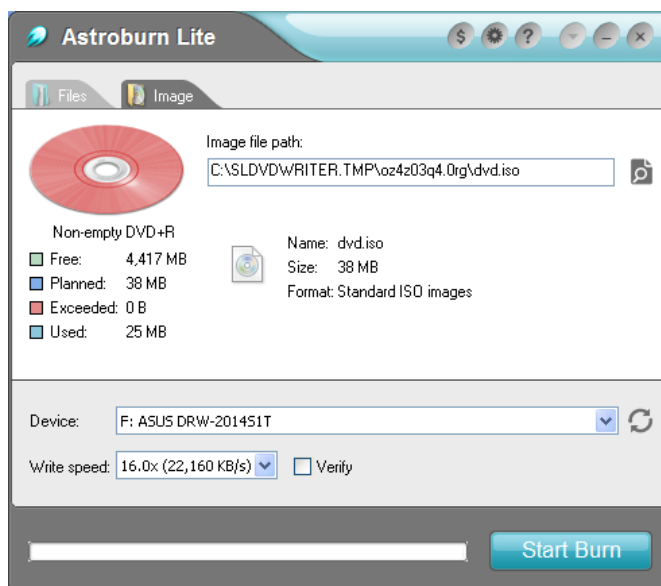
6. Configure menu background and DVD appearance via elements located in the Disc appearance (1) and the DVD menu (2) groups.



7. Click Create DVD (3) when all necessary settings are configured.
8. The Image of DVD was created window appears. Select Burn DVD... (4). Then click Execute (5).



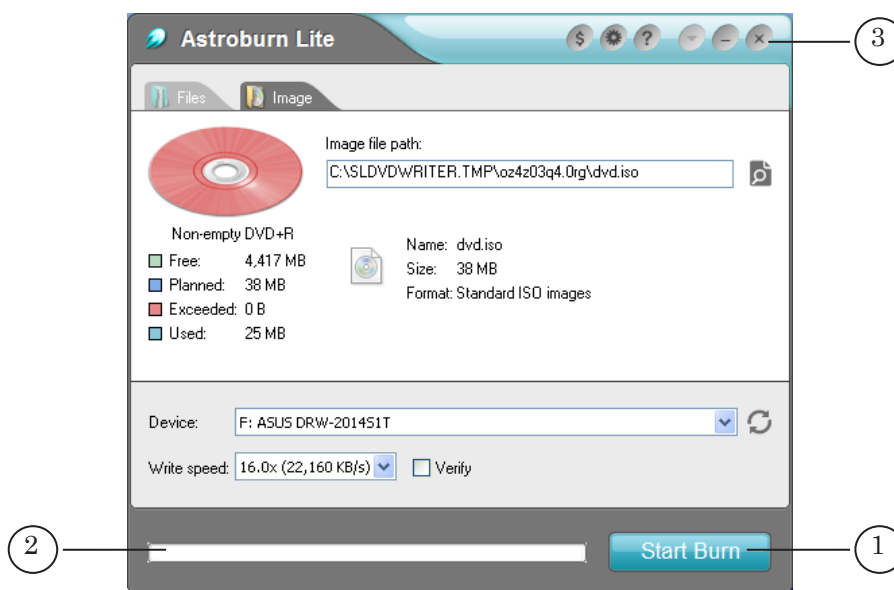
9. The Astorburn Lite application window appears.



10. Put a blank DVD in the drive.



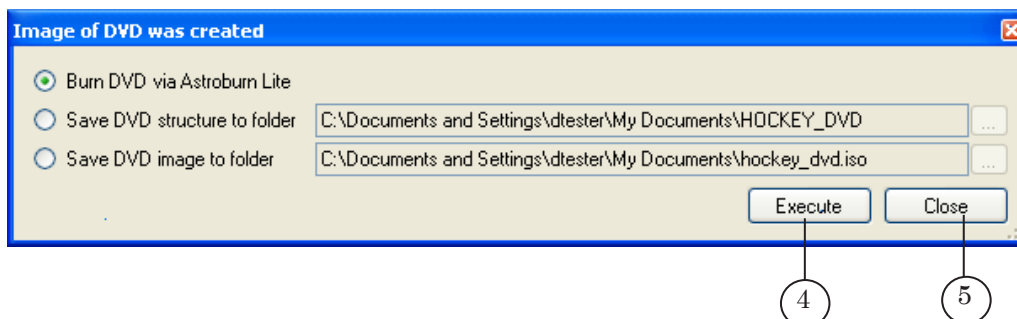
11. Click Start Burn (1) in the Astroburn Lite application window.



12. Burning of the DVD starts. Indicator (2) displays a progress of burning.

13. Close the application via the  button (3) when burning is completed.

14. Switch back to the Image of DVD was created window.

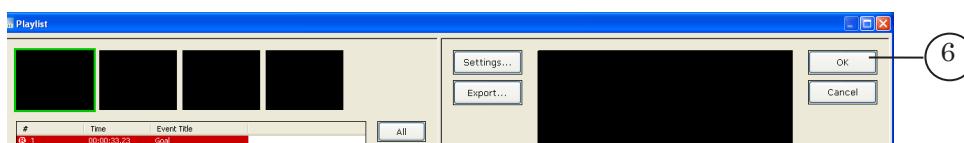


Click Execute (4) to repeat recording of DVD and then repeat steps 10–13.

Click Close (5) to close the window.

15. Close the SL DVD Writer window via the  button in the title bar.

16. Click Ok (6) to close the Playlist window.





4. Finish Working with the FDReferee Application

The application can be closed in one of the following ways:

- using the File > Exit menu command;
- using the  button located in the title bar.



RPMStorageManager – Working with Storages

General Information

The «Forward Referee» standard system includes 8 video cameras and 8 storages where recorded material is stored. There is a separate storage for video record from each camera.

A storage is a set of files located on PC hard discs, logically a storage is a continuous cyclical data array.

Every storage has its own name. Cam1, Cam2, ..., CamN (N is the number of used cameras) are default names of storages.

All storages used when recording of one game have the same capacity. Capacity is specified by the user who specifies duration of record and data rate (Kbyte/sec).

Filling of storage by data is circled. In the limits of the specified duration data is recorded successively. If duration of a record exceeds storage volume then the most outdated information will be overwritten by the current one.

Sometimes it is necessary to restore match record made several days/weeks/months ago when working with the Forward Referee system. The RPMStorageManager application is used for these cases to store a record in the archive and to restore it when necessary for recurrent review, creation of video report etc.



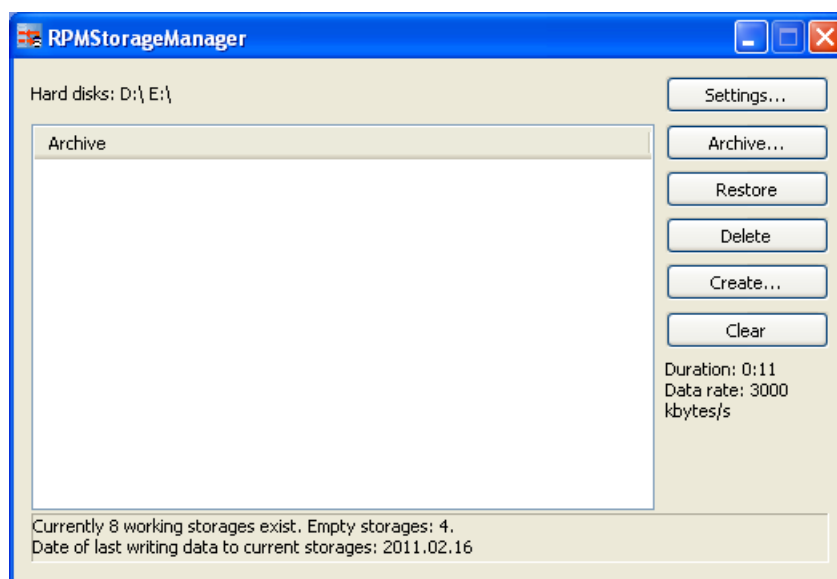
Launch and Exit From the RPMStorage Manager Application


The application can be launched in one of the following ways:

- via Start > Forward Referee > Storage Manager;
- via program shortcut



The main application window appears.



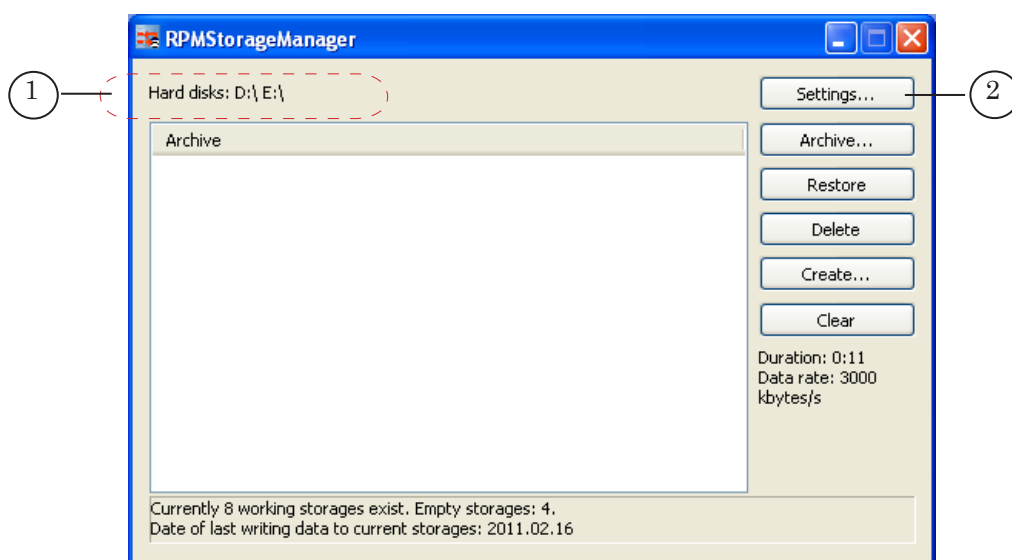
Click  to close the application.



General Workflow

1. Creation of storages

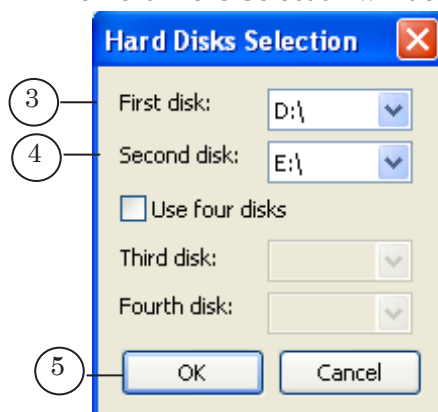
1. Check what disks are selected for storages in the Hard disks field (1).



The C disc is used as the system one. We recommend not to use this disc for storing of video records. Specify another disc if C:\ is displayed in the Hard disks information field. To do this:

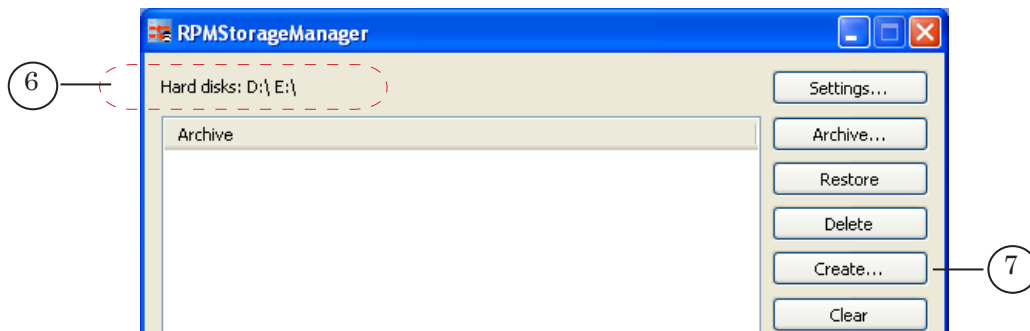
1. Click Settings... (2).

The Hard Disks Selection window appears.





2. Select D:\ in the First disk list (3) and E:\ in the Second disk list (4).
3. Close the window by clicking OK (5).
4. Specified configurations (6) will be displayed in the Hard disks field of the main application window.

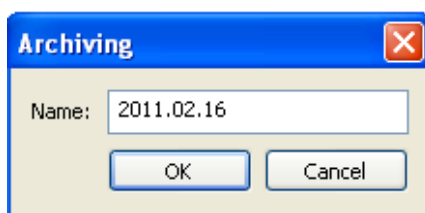


2. Click Create... (7).

The Storages Archiving window appears if created earlier storages were not moved to the archive.



Click No to delete current storages. The window will be closed. Click Yes to save storages in archive. The Archiving window appears.



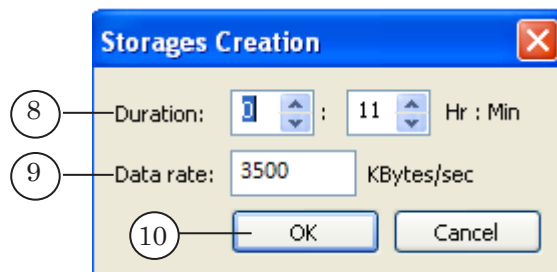
Specify name of the archive where records from storages will be removed in the Name field. Current date is the name of the archive by default. You may add, for example, names of teams that participated in recorded match. Click OK and the window will be closed.

3. The Storages Creation window appears. Set period of time (hh:mm) in the Duration field (8) that will



be enough to save the game to the storage, 3 hours is advisable value.

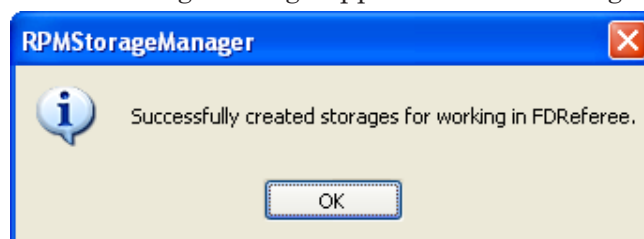
Default value (3500 Kbyte/sec) is specified in the Data rate field (9). We recommend you not to change this value.



Click OK (10). The window will be closed.

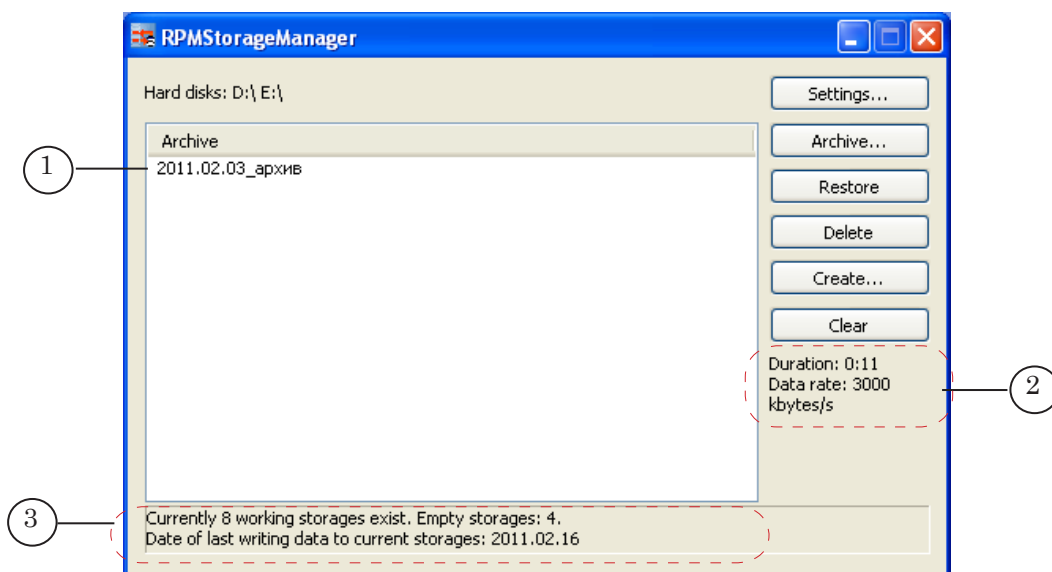
4. Eight storages under the Cam1, Cam2, Cam3, ..., Cam8 names will be created.

The following message appears after creating of storages.



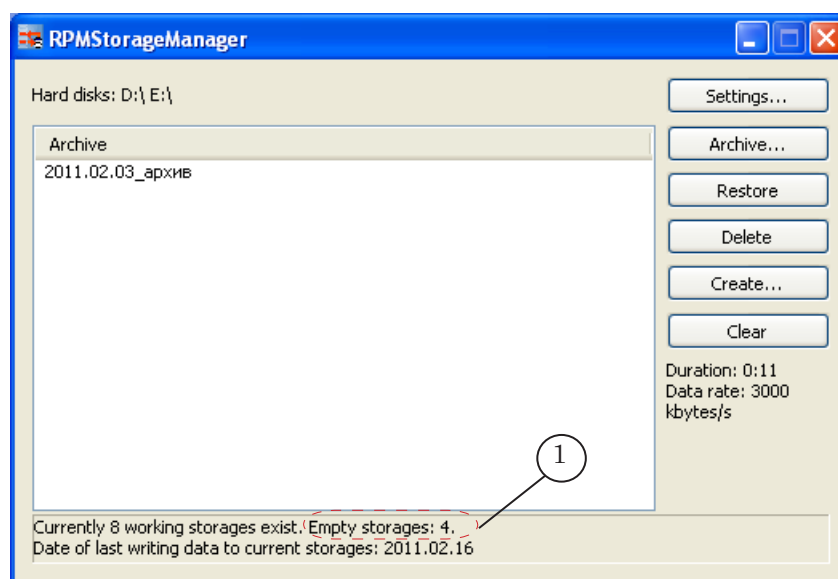
Click OK to close the window.

5. The following information will be displayed in the main application window:
 - name of the archive (1) in the Archive table if earlier created storages were moved into the archive;
 - information on duration of created storages and data rate in the (2) fields;
 - information on number of storages and its data in the (3) field.



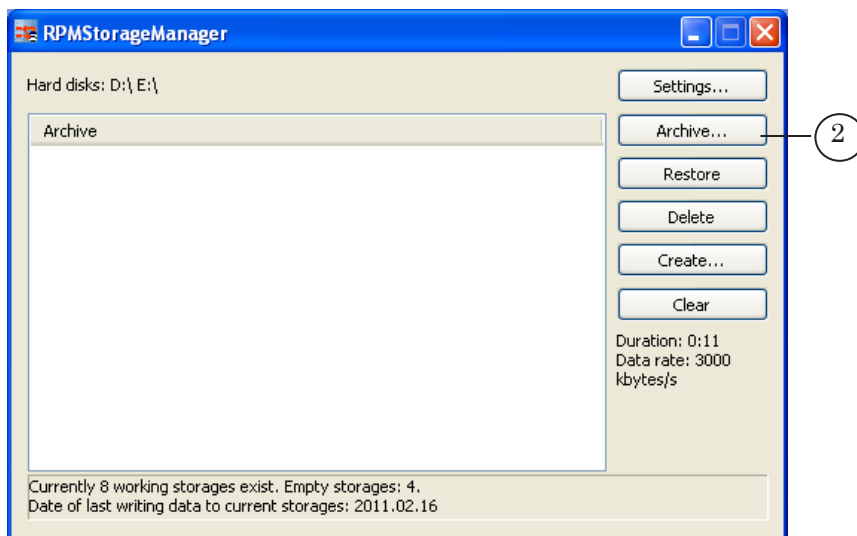
2. Moving of data from storages to archive

Information on existing storages is displayed in the (1) field.

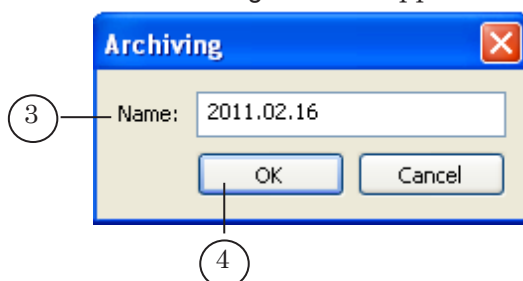


Complete the following steps to move records from storages into archive:

1. Click Archive... (2) in the main application window.



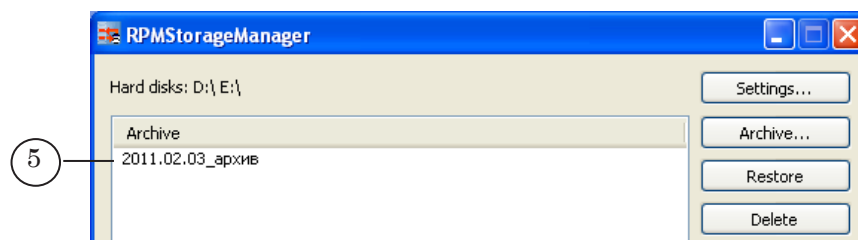
2. The Archiving window appears.



3. Specify name of the archive in the Name field where records from storages will be removed. Current date is the name of the archive by default. You may add, for example, names of teams that participated in recorded match.

4. Click OK (4). The window will be closed.

5. Name of the created archive (5) will be displayed in the Archive area of the main application window.

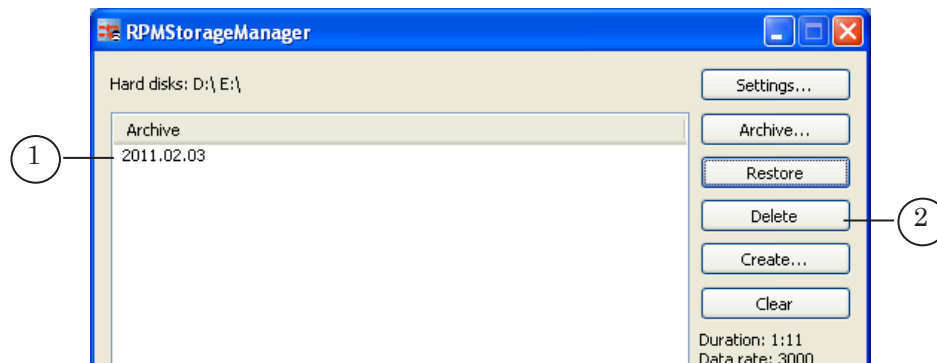


✓ **Important:** There is no any data compression and other transformations when moving storages in archive.



3. Deleting of archive

1. Select archive by clicking it (1) in the Archive list in the main application window.
2. Click Delete (2).



4. Restoring of video records from archive to storages

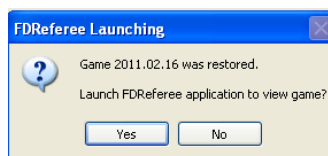
Restoring of record from archive is useful in some cases, e.g. when it is necessary to review some disputable moments of a game or to create video report one more time.

Complete the following steps to restore record from archive:

1. Select archive by clicking it in the Archive list of the main application window.
2. Click Restore.
3. The following window appears if there are video records in current storages at the moment.



Data will be transmitted from the archive to storage. The following window occurs then.



4. Click Yes to view storages.



Advisable Workflow for Preparing of a New Game

1. Launch the RMPStorageManager application.
2. Delete archives of expired games. Common requirement is to store recorded games that took place during 2 last weeks.
3. Move record of the last game into the archive.
4. Create storages for recording of a new game.
5. Close the application.



Useful Links

ForwardT Software set: description, download, documentation, solutions

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

Support

e-mail: forward@sl.iae.nsk.su

forward@softlab-nsk.com

forward@softlab.tv

Forum

<http://www.softlab-nsk.com/forum> (currently available in Russian only)

Documentation for more information:

[FDReplay VideoIn. Multichannel AV capture to storages.](#)

Translation from

June 7, 2011

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