

FDPostPlayCapture



Input of Audio and Video Data Into
Storages, Dealing with
Storages Using the
FD322, FD422, FD842 Boards

*Revision as of
January 18, 2012*

User's Guide

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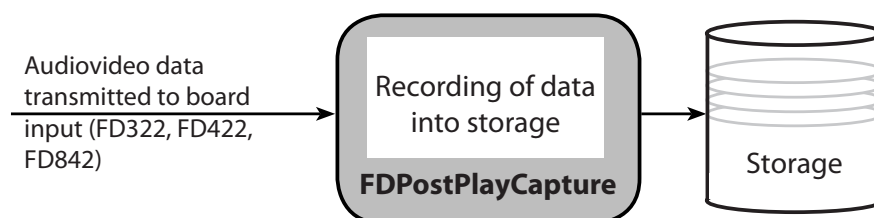
Table of Contents

Introduction.....	4
Launch of Program	5
1. Ways of Program Launch.....	5
2. Format of Command Line.....	6
3. Modes of User Interface	7
4. Modes of Program	8
Program Interface	9
1. Main Window	9
2. Table with Input Lines List.....	10
Preliminary Steps to Data Input	12
1. General Workflow to Data Input Into Storage	12
2. Customizing of Work Parameters	12
Appearance of Sound Volume Indicator	14
3. Capture Lines	15
3.1. Adding of Lines	15
3.2. Changing of Capture Line Settings.....	17
3.3. Deleting of Capture Lines	18
4. Storages	19
4.1. Creation of Storage(s)	19
4.2. Deleting of Storage(s)	30
4.3. Clearing of Storage(s).....	32
Data Input Into Storage(s).....	33
1. Start/Stop of Data Input Into Storage(s).....	33
2. Control Over Procedure of Data Input.....	35



Introduction

The FDPostPlayCapture program is used to customize and control input of audio and video data into storages when dealing with the FD322, FD422, FD842 boards.



The FDPostPlay VideoIn program is used when dealing with the FD300 board to input data into storage. For more information on PostPlay system see [«PostPlay. Retransmitted Signal Delay Server. User's Guide»](#).

The FDPostPlayCapture program is included into delivery set of the following products: Forward TP, Forward TP2, Forward Goalkeeper, Forward Referee.

The present document provides with instruction on dealing with the FDPostPlayCapture program.



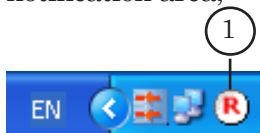
Launch of Program

1. Ways of Program Launch

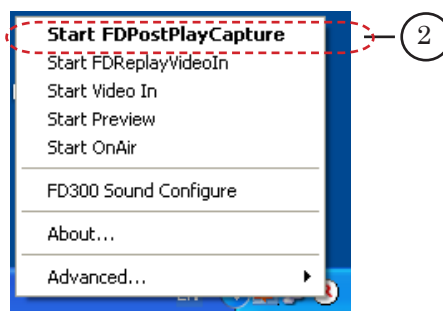
The FDPostPlayCapture program can be launched at opening of the ~\PostPlay\FDPostPlayCapture.exe file, where ~ denotes a full path to the folder where ForwardT Software set is installed.


Also, the program can be launched via:

- the Start menu command:
Programs > ForwardT Software > PostPlay > PostPlayCapture;
- command line;
- the Start FDPostPlayCapture command of the FDPostPlay Indicator icon context menu:
 - right-click FDPostPlay Indicator (1) located in taskbar notification area;



- select Start FDPostPlayCapture (2) in the appeared context menu.



When the program is launched its main window appears. The program has settings specified during the last program session. Also, the  icon (3) appears in taskbar notification area.





2. Format of Command Line

You can launch the program from command line that has the following format:

ProgramFile [#N] [-key]

where:

- ProgramFile denotes a full path to the FDPPostPlayCapture.exe file;

✓ **Important:** If names of files and folders have spaces then path to file in command line must be put in double quotes – " ... ".

- #N denotes logical index of program instance. This parameter is not obligatory. If index is not specified then instance #1 is launched;
- -key denotes a key for implementing of a certain action when the program is launched. This parameter is not obligatory. The following actions are possible:
 - -start denotes immediate start of data input into storage after program launch;
 - -minimize denotes immediate minimizing of program window after program launch;
 - -output enables capturing of data from boards outputs (inputs and outputs of boards are displayed at customizing of capture lines);
 - -exit denotes closing already launched program instance.

It is possible to use several keys in one command line. In this case keys must be spaced.

➡ **Example:** "C:\Program Files\ForwardT Software\PostPlay\FDPostPlayCapture.exe" -start -minimize

Result of command execution: FDPPostPlayCapture is launched, input of data into storage is started, program window is minimized.






3. Modes of User Interface

The program has 2 modes of interaction with user:

- window mode (when the main program window is maximized);
- minimized mode (when the main program window is minimized and there is program icon in taskbar notification area (1)).



Click the  or  icon to minimize the main program window. In this case the program continues working.

Click the  icon to maximize the main program window. The button is located in taskbar notification area.



4. Modes of Program

The program has 2 modes of working:

- customizing (in this mode user only customizes capture lines and storages; data is not transmitted into storage);
- input of data into storage (in this mode data is transmitted into storages; user can not modify settings of capture lines and storages).

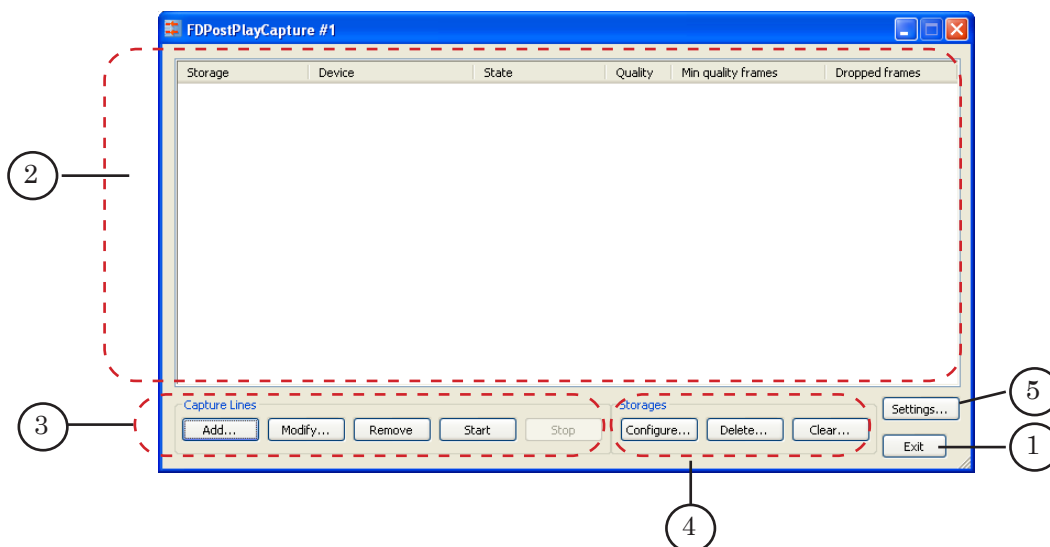
The program is in customizing mode when it is launched. User switches the program from one mode into another one.



Program Interface

1. Main Window

FDPostPlayCapture main program window is shown on picture below.



Title bar of the main program window displays name of the program and instance logical index. The Close (X) button is used to minimize the window. The Exit button (1) is used to exit the program.

The main program window has the following elements:

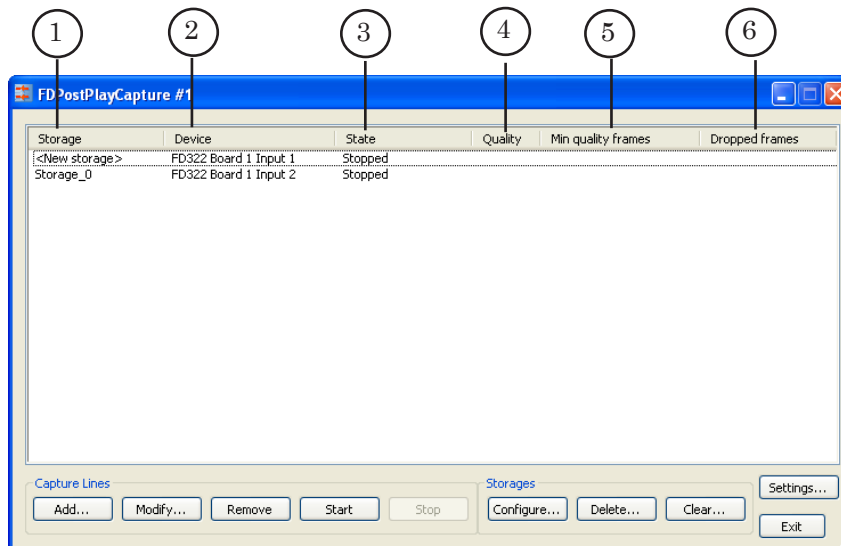
- table that displays customized capture lines (2).
- the Capture Lines group (3) has buttons to customize capture lines and control over data input:
 - Add... is used to add new capture line;
 - Modify... is used to change settings of selected capture line;
 - Remove is used to delete selected capture lines;
 - Start is used to start data input into storages;
 - Stop is used to stop data input into storages.
- the Storages group (4) has buttons for dealing with storages:
 - Configure... is used to customize selected storages;
 - Delete... is used to delete storages (user selects what storages should be deleted in window appeared after clicking the button).
 - Clear... is used to clear storages (user selects what storages should be cleared in window appeared after clicking the button).
- Settings... (5) is used to customize application settings.



2. Table with Input Lines List

Table with a list of capture lines displays information on capture lines settings and a procedure of data input into storages.

One line in the table corresponds to one capture line.



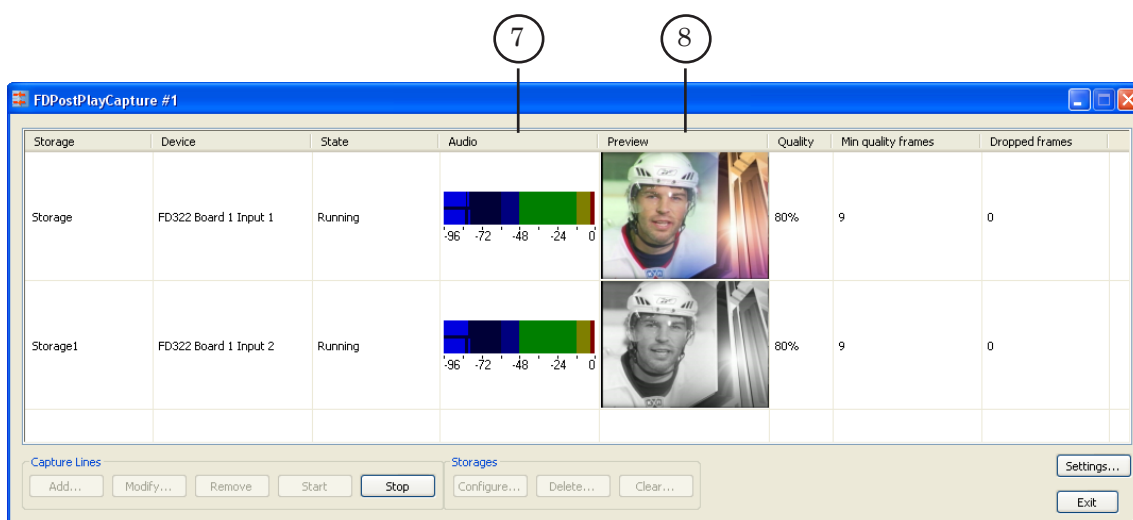
The following information is displayed in table columns:

- Storage (1) is name of a storage where data is captured;
- Device (2) is a device that captures data;
- State (3) is a state of capture line:
 - Stopped denotes that capture and input of data into storage are not implemented;
 - Running denotes that capture and input of data into storage are implemented;
- Quality (4), Min quality frames (5), Dropped frames (6) columns display information on compression quality of data being captured input into storage, for more information on this issue see the «Data Input Into Storage» section, the «Control over Procedure of Data Input» item.

If you customized displaying of sound volume indicator and preview area then two more columns (Audio (7) and Preview (8)) appear in the table (see picture below). For more information on customizing of these issues see the «Preliminary Steps to Data Input» section, the «Customizing of Work Parameters» item.



The picture below displays main program window with customized sound volume indicator and previewing area. Data is being captured into storages.



At pointing table cell by mouse cursor a tooltip appears. The tooltip provides with information on cell contents. Tooltips of the Storage column displays information on storage and tooltips of the Device column displays information on audio and video format of selected device used for data input.



Preliminary Steps to Data Input

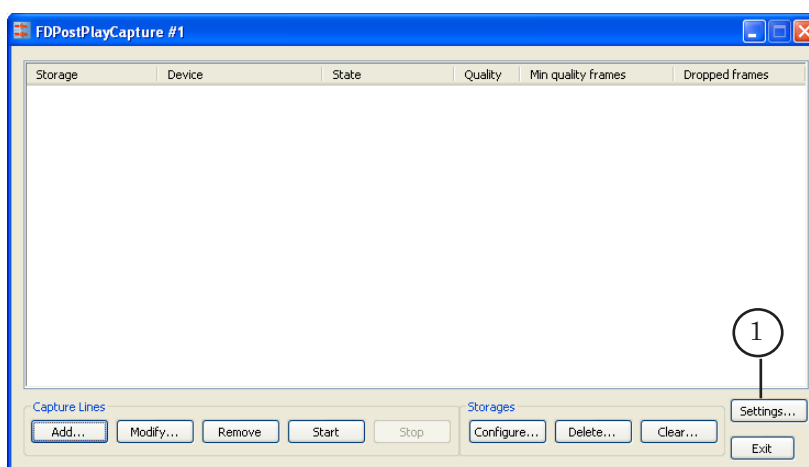
1. General Workflow to Data Input Into Storage

1. Customize work of the program.
2. Customize capture lines.
3. Customize storages (if necessary).

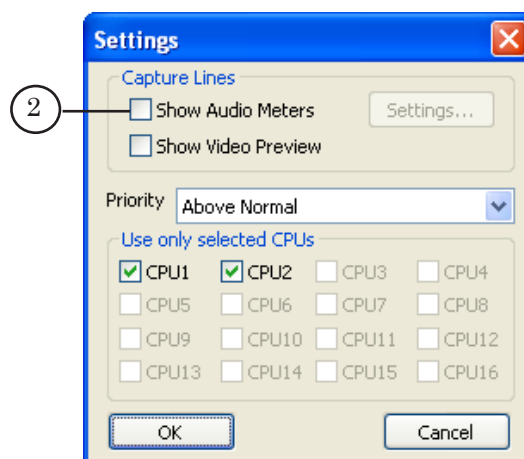
2. Customizing of Work Parameters

Workflow of customizing:

1. Click Settings... (1) in the main program window.

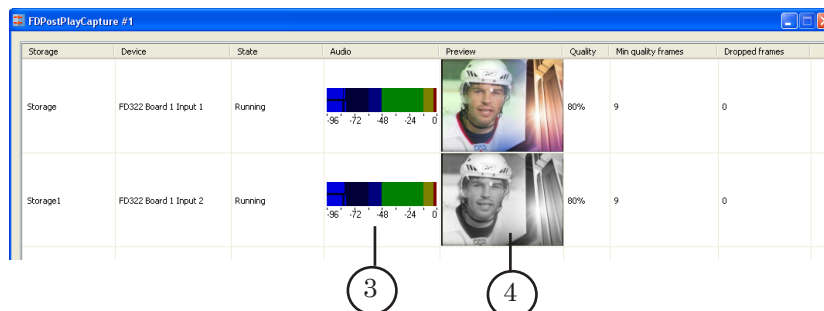


The Settings window appears.

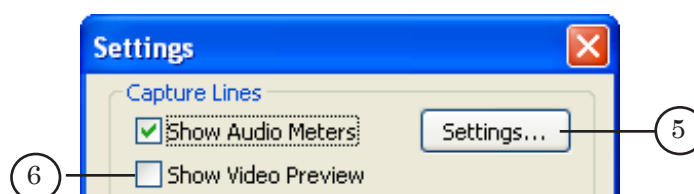




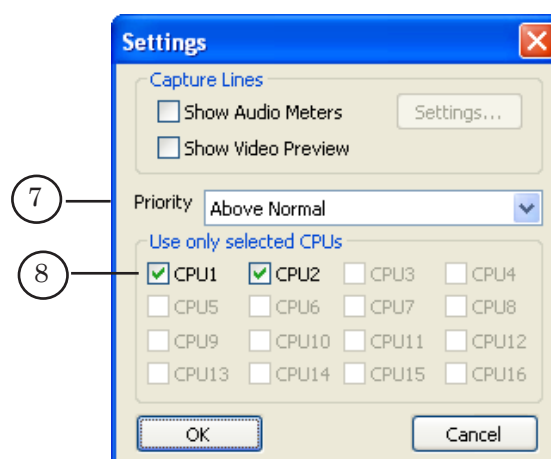
- Put the Show Audio Meters check mark (2) if it is necessary to display indicators of sound volume in table (3).



When you put this check mark the Settings... button (5) becomes available. The Settings... button is used to open a dialog window where you can customize indicator appearance. More information on this issue see in the «Appearance of Sound Volume Indicator» item.



- Put the Show Video Preview check mark (6) if it is needed to display preview images (4) during data input into storage.
- Select program execution priority in the Priority drop-down list (7):
 - Normal;
 - Above Normal;
 - High;
 - Realtime.



Recommended value here is – Above Normal.



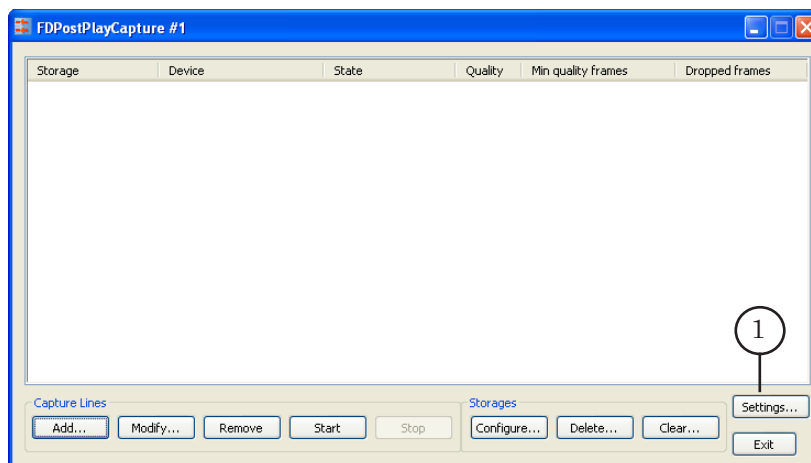
- Specify processors that can be used by the program by putting necessary check marks in the Use only selected CPUs group (8).

✓ **Important:** Be attentive when specifying priorities. Note that specifying of one prioritized task (if the High value is selected) may lead to a full capture of resources by this prioritized task. In this case it is impossible to implement some other processes. Incorrect distribution of CPU resources among programs can lead to abrupt decreasing of system performance.

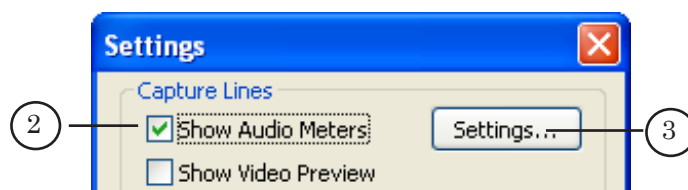
Appearance of Sound Volume Indicator

Workflow of customizing:

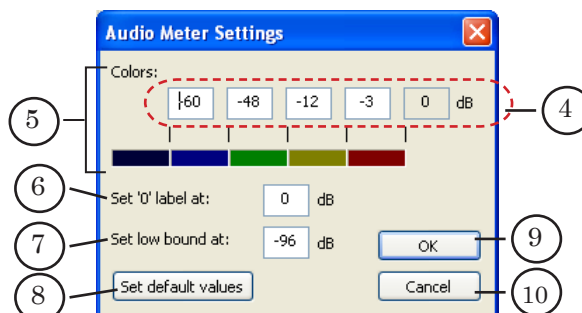
- Click the Settings... button (1) in the main program window.



The Settings window appears.



- Put the Show Audio Meters check mark (2) if it is absent.
- Click Settings... (3). The Audio Meter Settings window appears.





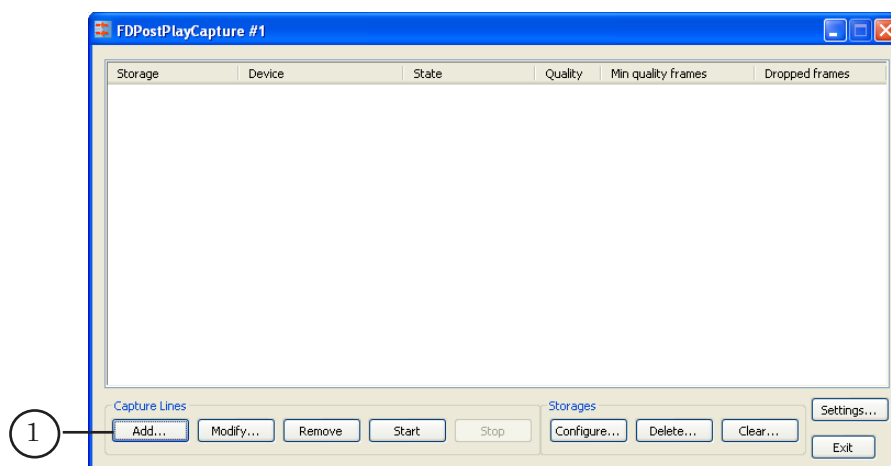
4. Specify bounds of sound volume in the fields (4) of the Colors group (5).
5. Specify volume that corresponds to 0 dB in the Set '0' label field.
6. Specify low volume bound in the Set low bound at field (7).
7. Click the Set default values button (8) if needed to restore default values.
8. Close the Audio Meter Settings window by clicking:
 - OK (9). In this case the window is closed with saving of made configuration;
 - Cancel (10). In this case the window is closed without saving of made configuration.

3. Capture Lines

3.1. Adding of Lines

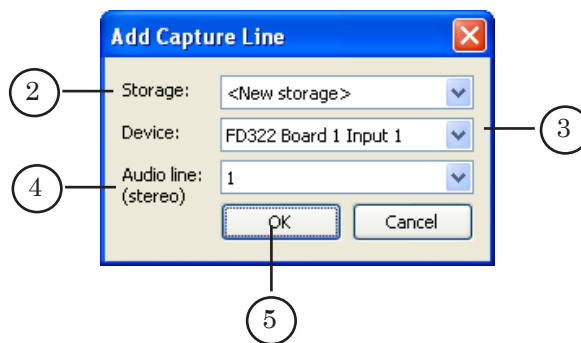
Complete the following to add capture line:

1. Click Add... (1) in the main program window of the Capture Lines group.



The Add Capture Line window appears.

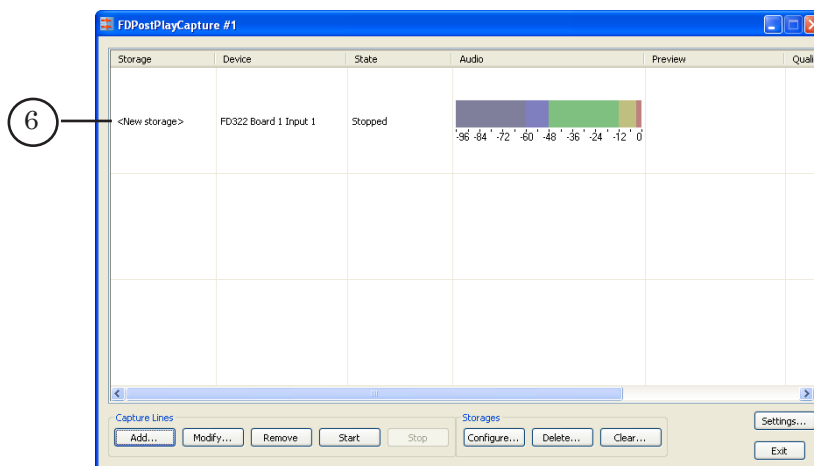
2. Select in the Storage drop-down list (2):
 - name of a storage (in case of using a storage created earlier);
 - <New storage> (in case if storage is not created yet).



✓ **Important:** You should create new storage after customizing capture line if it was not created earlier during previous program sessions.

3. Select board input in the Device list (3). Selected input will be used as data source to be captured in the capture line.
4. Select necessary line in the Audio line (stereo) list (4).
5. Close the Add Capture Line window by clicking OK (5).

Information on added line is displayed in the main program window.

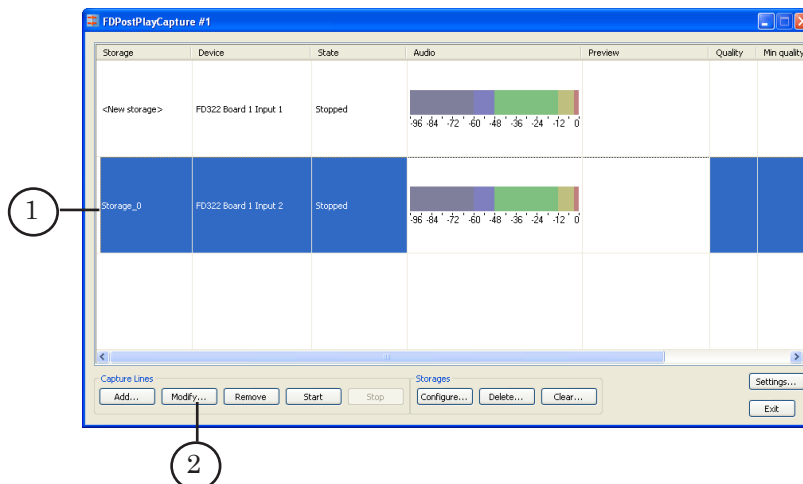


6. Add necessary number of lines by repeating steps 1–5.

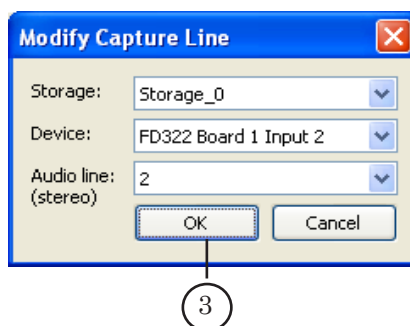


3.2. Changing of Capture Line Settings

1. Select line in the table with the list of capture lines which settings you wish to change (1) and click Modify... (2). You can also change line settings by double-clicking line field in the table. The Modify Capture Line window appears.



2. Change settings in the Modify Capture Line window.

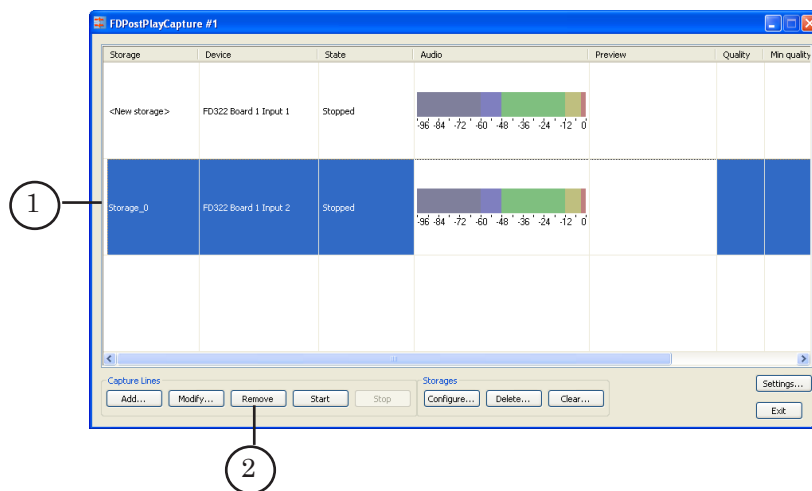


3. Then click OK (3) to apply changes and close the window.

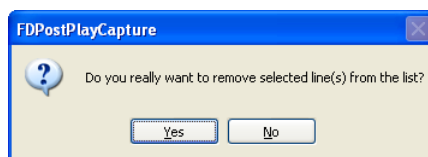


3.3. Deleting of Capture Lines

1. Select line(s) in the table with a list of capture lines by clicking line(s) that you wish to delete (1).



2. Click Remove (2) in the Capture Lines group.
3. The following window appears.



4. Click Yes. Selected line(s) will be deleted and the window will be closed.

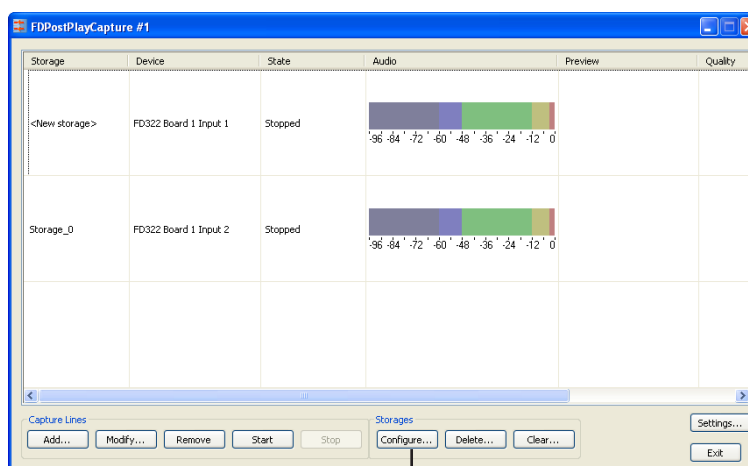


4. Storages

4.1. Creation of Storage(s)

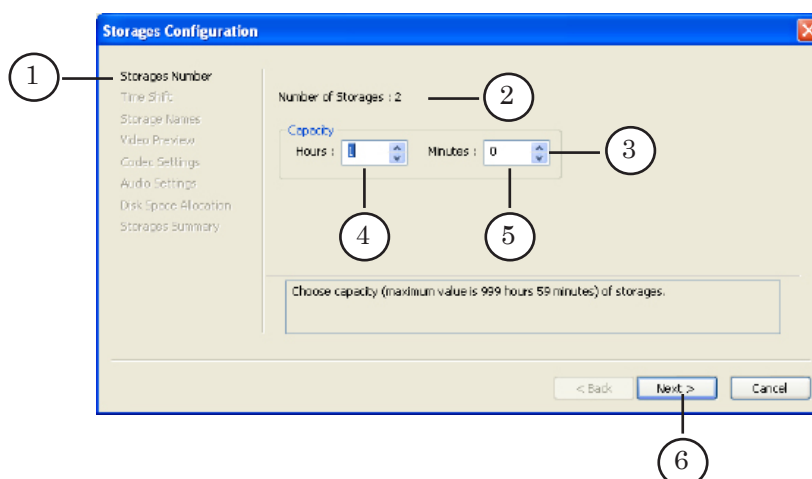
You can create new storage(s) after customizing of capture lines. Workflow of creating is the following:

1. Select capture lines for which it is needed to customize storages. If no lines are selected then all of them will be selected automatically.
2. Click Configure... (1) in the Storages group of the main program window.



1

3. The Storages Configuration window, the Storages Number step (1).



4. Number of storages to be created is displayed in the Number of Storages field (2).
5. Specify storage capacity via the Capacity group of elements (3). Capacity is specified in hours and minutes in the Hours (4) and Minutes fields (5). All created storages will have equal capacity.

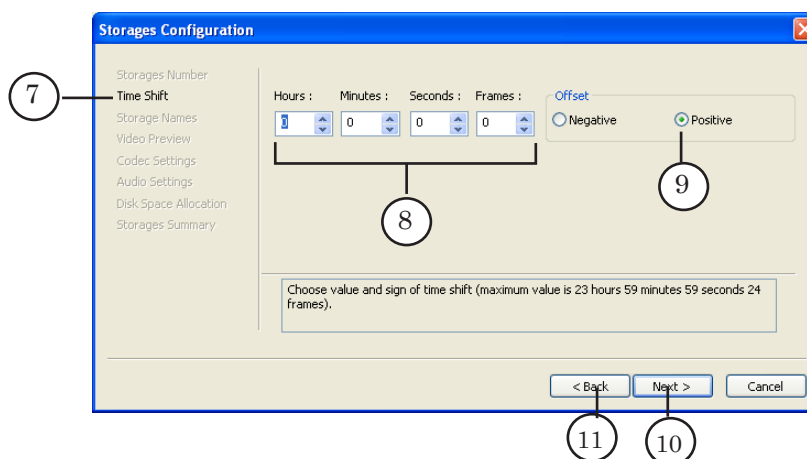


- Then click Next (6) to pass to the next step – Time Shift (7).
- If needed, specify time shift in the hh:mm:ss:fr format.

Time shift changes time marks values corresponding to storage data.

Time shift simplifies time difference between cities located in different time zones when retransmitting of data is implemented.

Time shift can be positive and negative.

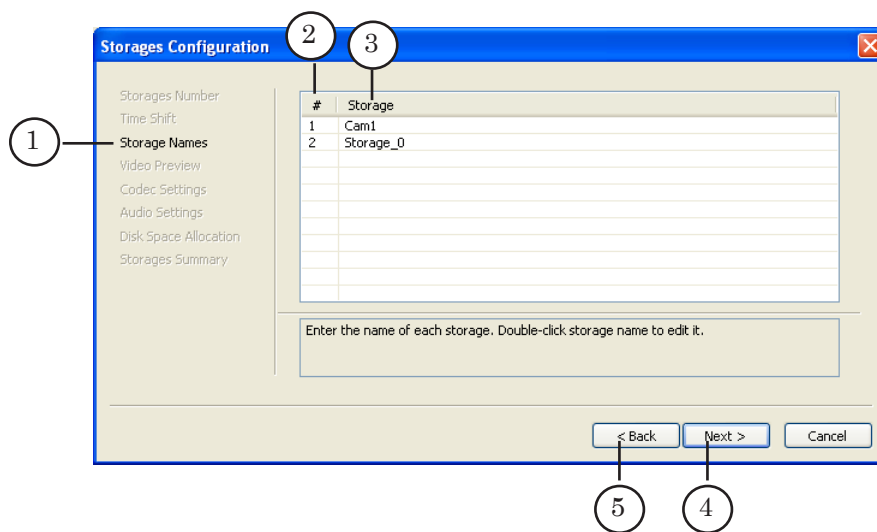


- Specify offset in the Hours:, Minutes:, Seconds:, Frames: fields (8).
- Put one of the marks in the Offset group (9):
 - Positive – at recording of time data into storage offset is added to system time;
 - Negative – at recording of time data into storage offset is removed from system time.
- Click Next (10) to continue configuration. The Storage Names window appears.

If you want to return to configuration of the previous step click Back (11).



11. Specify names of storages at the Storage Names step (1).

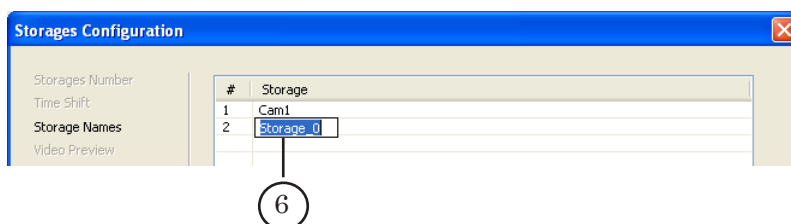


There is a table with a list of storages being created:

- the # column (2) displays indices of storages;
- the Storage column displays names of storages.

Default name of storage is CamX, X denotes index of corresponding storage.

12. If you want to change name of storage click line in table with a list of storages and (6) specify new name.



13. Click Next (4) to continue configuration. The Video Preview window appears.

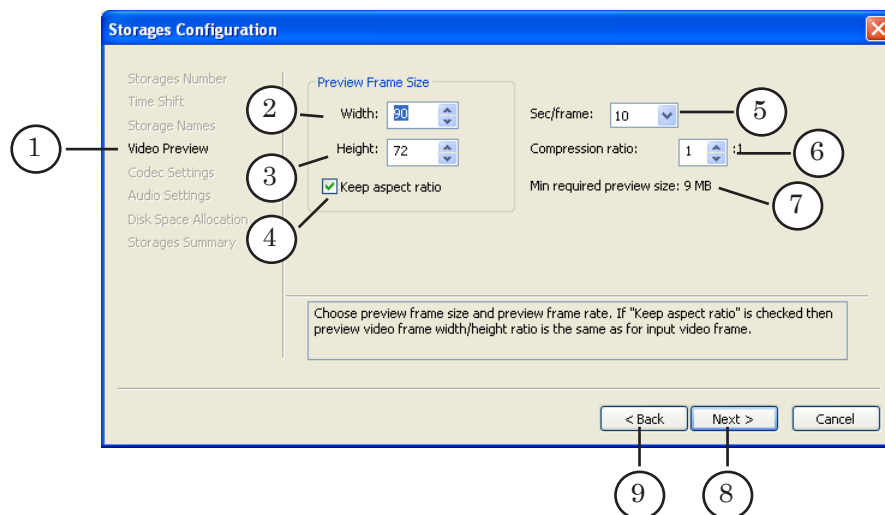
If you want to return to configuration of the previous step click Back (5).



14. On this step you configure parameters for creation of data to be previewed in the FDPostPlay Preview program.

Note:

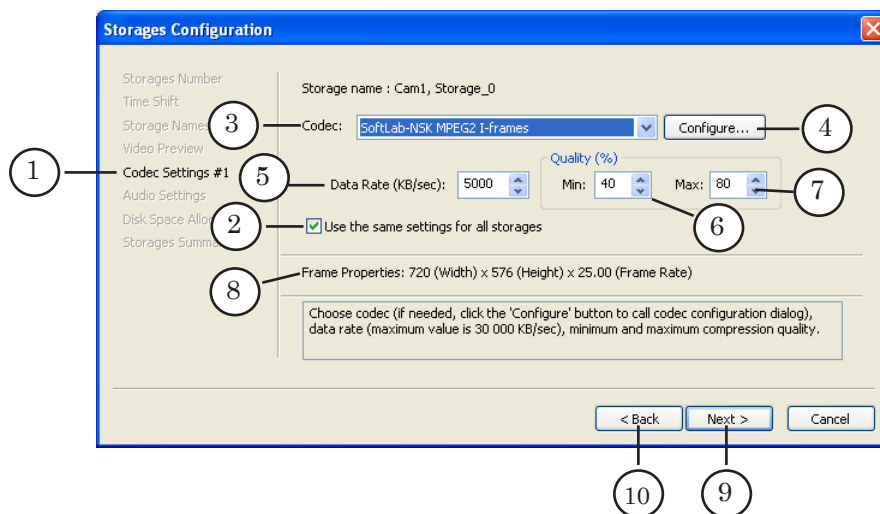
FDPostPlay Preview program is used to preview storages data, create, edit and remove clips. Also, the program is used to export storage data to video files. More information on this program you can find in the [«PostPlay. Retransmitted Signal Delay Server. User's Guide»](#).



15. Specify width and height of preview image frames in the Width (2) and Height (3) fields in pixels.
16. If it is needed to keep aspect ratio put corresponding check mark (4).
17. Specify time shift between adjacent images in the Sec/frames field (5).
18. Specify compression ratio in the Compression ratio field (6).
19. Data size (in MB) necessary for storing preview data is displayed in the Min required preview size field (7) automatically.
20. Click Next (8) to continue configuration.
The # 1 Codec Settings window appears. If you want to return to configuration of the previous step click Back (9).



21. On the # 1 Codec Settings step (1) you configure parameters of codec and data compression in storages.



22. Put the Use the same settings for all storages mark (2) if you want to have the same parameters for all storages.

Remove the Use the same settings for all storages mark if you want to work with different codec parameters in storages.



Tip: We recommend having the same settings for all storages.

23. Select video compression codec in the Codec drop-down list (3).
24. Click Configure... (4) if it is needed to configure specified codec.
25. Specify average data rate for codecs that support usage of compression quality in the Data rate field (5). If you are dealing with codec that does not support setting of quality then the field is not available for changing.
26. Specify minimal and maximal compression quality for selected codec in percent in the Min (6) and Max fields (7).

When data is input into storage the program will dynamically change quality value within specified range between minimal and maximal values trying to get specified average data rate.

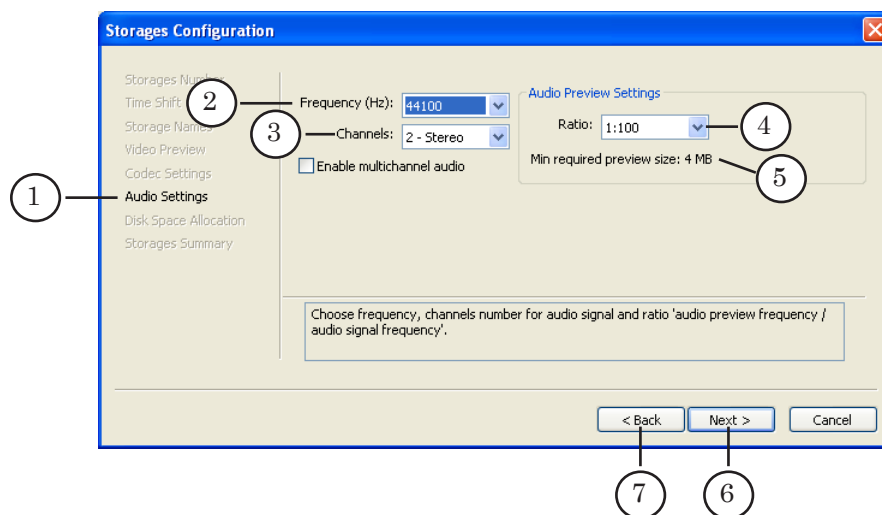
27. The Frame Properties field (8) displays a format of video data received from the FD422, FD322, FD842 boards: width, height and frame rate.
28. Click Next (9) if you configure codecs for different storages separately (in this case the Use the same settings for all storages mark is put).



29. If all storages have the same settings click Next (9) to pass to the next step – Audio Settings.

If you want to return to configuration of the previous step click Back (10).

30. On this step you configure audio preview settings.



31. The Frequency (Hz) field (2) displays sample rate of audio that is recorded into storage.



Tip: We recommend not changing default value of this parameter.

32. Specify number of channels in the Channels list (3):

- 1 - Mono – is used for mono recording;
- 2 - Stereo – is used for stereo recording.

Disk capacity that is required for storing of audio data depends on specified way of audio recording. If you have stereo recording then capacity is increased in 2 times in comparison with a mono recording.

33. Configure preview audio settings by selecting ratio in the Ratio list (4). Ratio is a number of signal audio units selected for being previewed from all audio data.

34. Data size required for storing of audio data for being previewed is displayed in the Min required preview size line (5).



Tip: We recommend not changing default value (1:100) of this parameter.

35. Click Next (6) to pass to the next step – Disk Space Allocation.

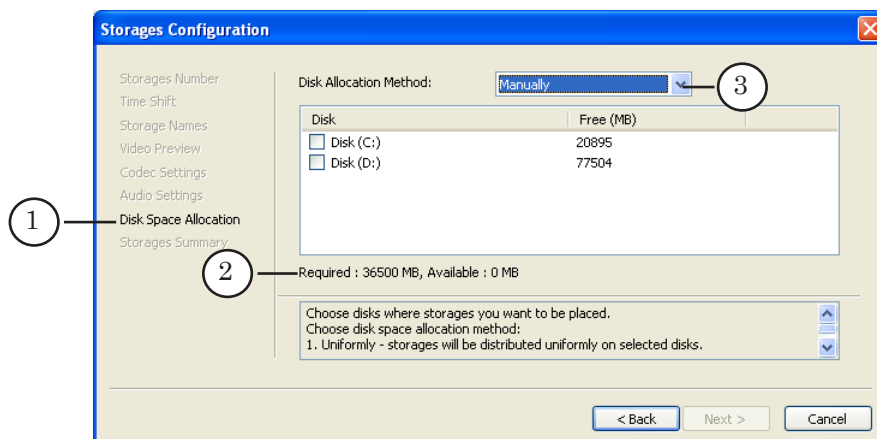
If you want to return to configuration of the previous step click Back (7).



36. On this step you configure disk space allocation.

The Required line (2) displays a required disk space for created storages.

The capacity is calculated automatically basing on made configuration. Specified storage duration, codec, data rate, audio settings and preview settings are taken into account.



Tip: We insistently recommend to take into account the following at distributing disk allocation:

1. Do not allocate storages on system disk.
2. Leave at least 5–10 GB of disk space for some service purposes.

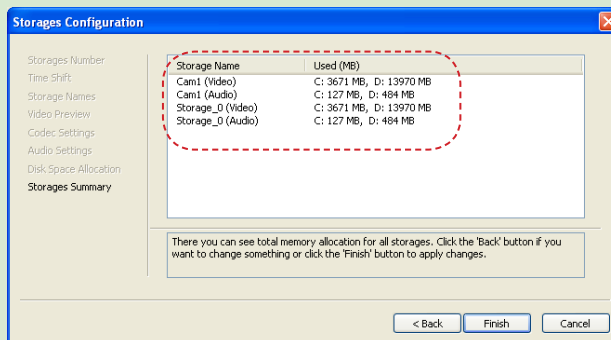
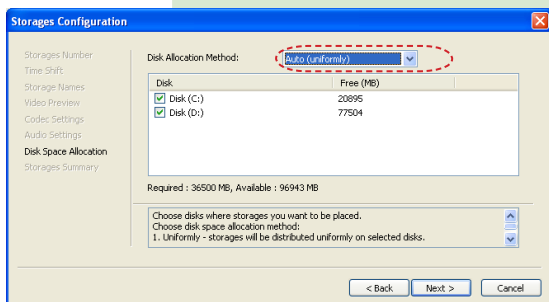
37. Select method of disk allocation in the Disk allocation method drop-down list (3):

- Auto (uniformly) – disk allocation is implemented uniformly. On each of the selected disks space for each storage is allocated (see Example (a) below).
- Auto (sequentially) – disk allocation is implemented automatically beginning from the last disk in the list. If there is not enough space on disk to store all storages then missing space will be allocated on the previous disk, etc. (see Example (b) below).
- Manually – allocation is implemented manually for each storage separately.

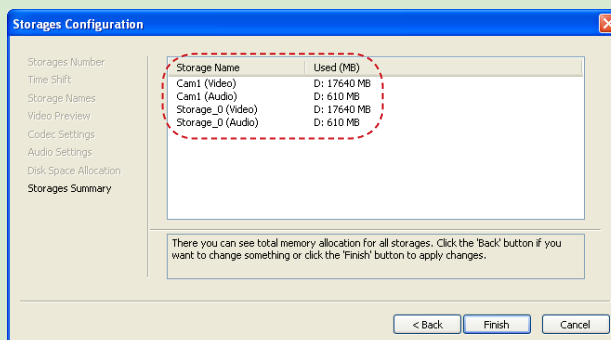
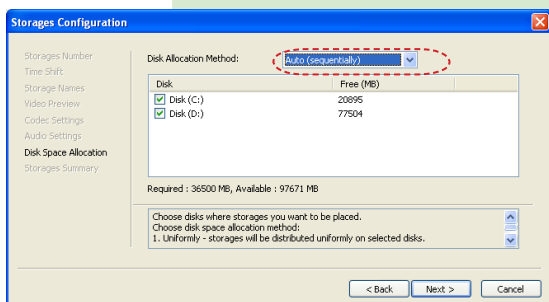


Example: Examples below show automatic disk allocation of the Cam1 and Storage_0 storages:

- (a) – in case of a uniform method;
- (b) – in case of a sequential method.



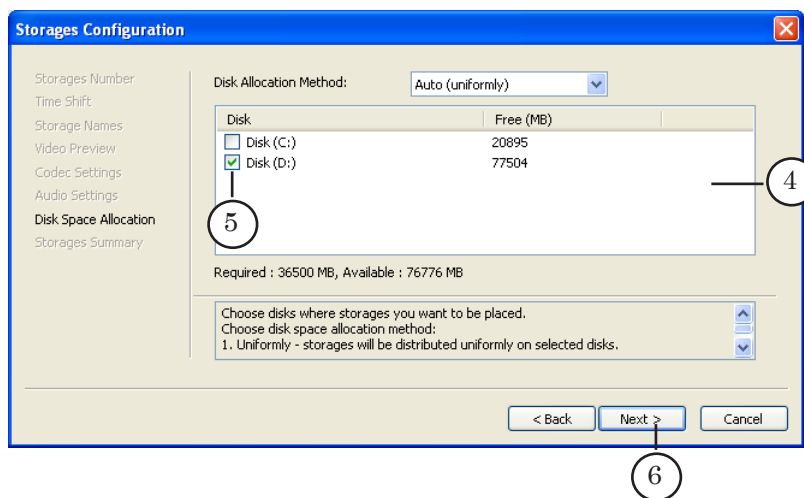
a



b



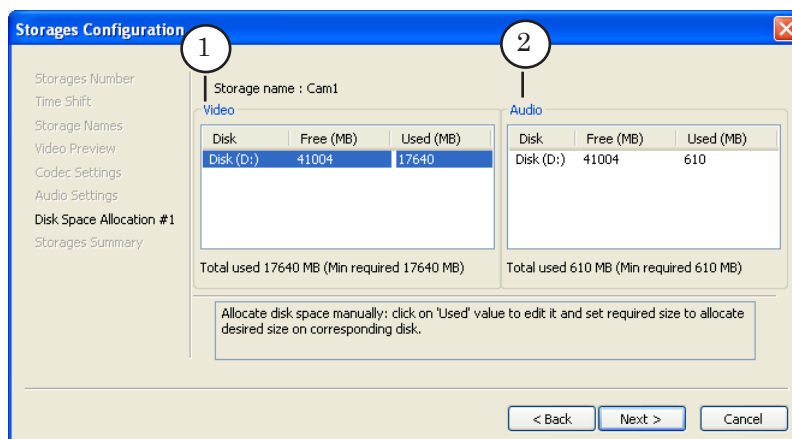
38. Put marks (5) in the table (4) for disks where storages can be allocated.



39. Then click Next (5).

If you selected the Auto (uniformly) or Auto (sequentially) methods you will pass to the next step – Storages Summary.

If you selected the Manually method then window for manual customizing of place on disk appears.



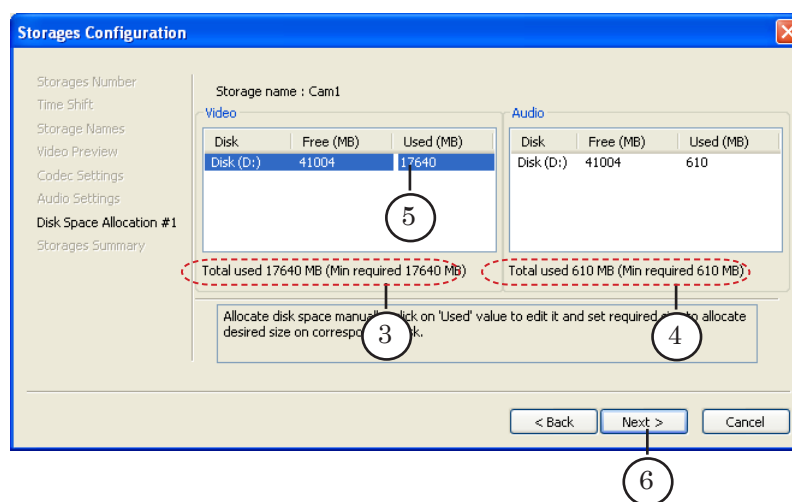
When you create several storages disk allocation is made separately for each of the storages.



Allocation of space is implemented by means of tables located in the Video (1) and Audio groups (2). Each table has the following columns:

- Disk displays names of disks specified on the previous step;
- Free (MB) displays free space on disk in MB;
- Used (MB) displays used space on disk.

Each group has a line with information on allocated and required space for storing of video (3) and audio data (4) in created storage. Required space is specified automatically basing on made configuration.



Click necessary line to enter corresponding data. Then click the Used (MB) line (5) and enter data.

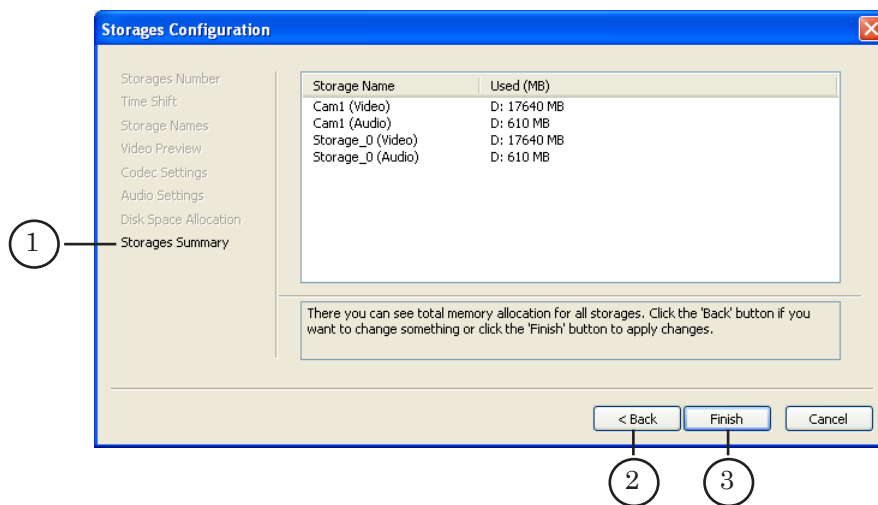
Allocate disk space for each of the created storages.

Configuration of the next storage is implemented by clicking the Next button (6). The button becomes available only when data in both Audio and Video groups of the current storage is entered.

Click Next (6) to pass to the next step – Storages Summary.



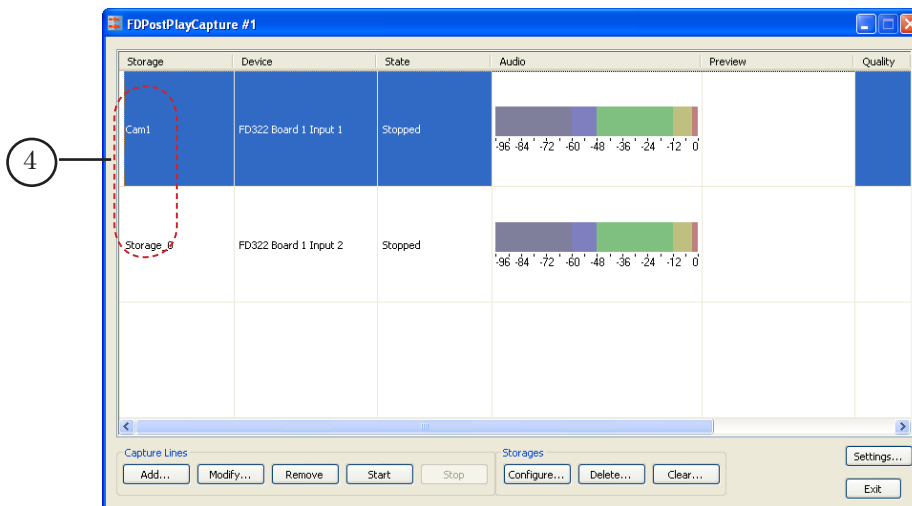
40. Information on disk space allocation is displayed on the Storages Summary step (1).



If you want to return to configuration of the previous step click Back (2).

To complete configuration of storages click Finish (3).

41. Configured storages (4) are displayed in the main program window in the table with a list of capture lines.

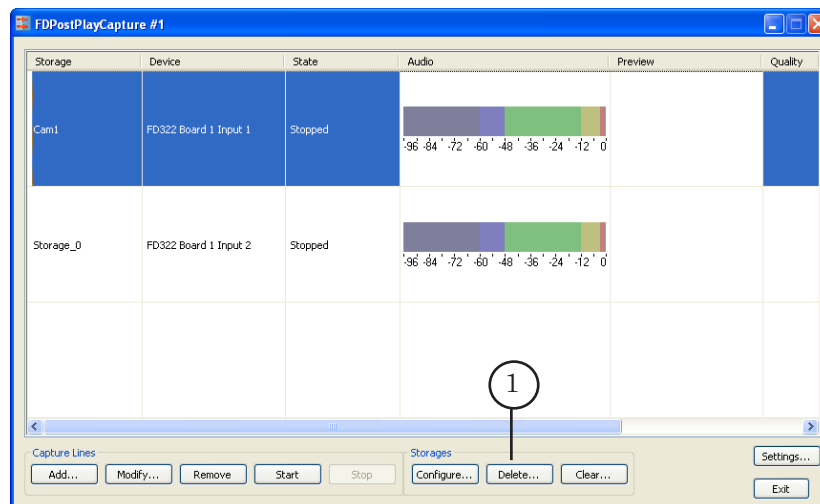




4.2. Deleting of Storage(s)

Complete the following if you want to delete created storage(s):

1. Click Delete... (1) in the main program window in the Storages group.

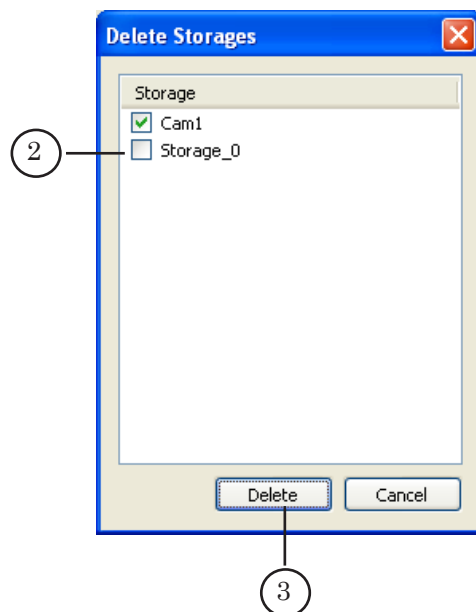


2. The Delete Storages window appears.

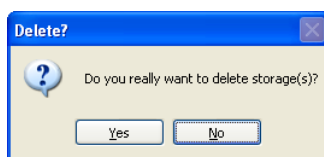




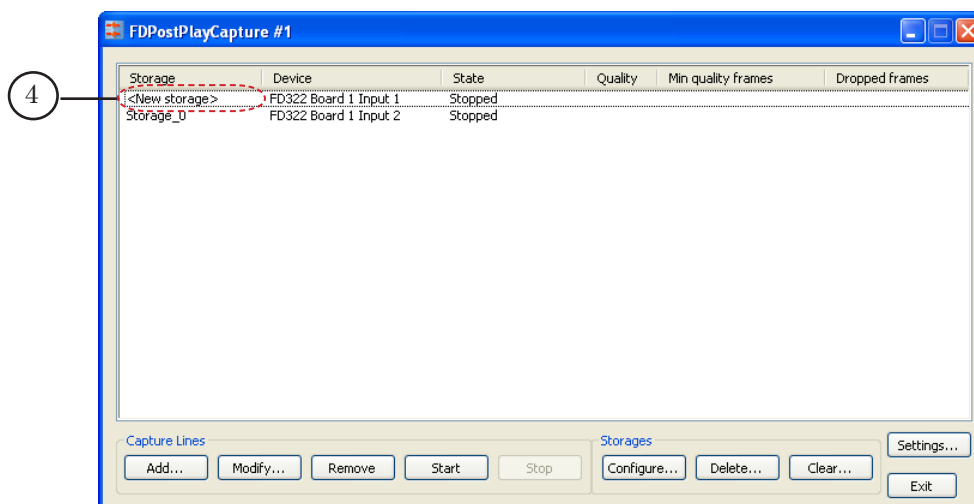
- Put marks (2) in lines with storage(s) that you want to delete.



- Then click Delete (3). Confirmation message appears.



- Click Yes to delete storage(s).
- The <New Storage> (4) appears in line where deleted storage(s) was if this deleted storage(s) was specified in capture line settings.

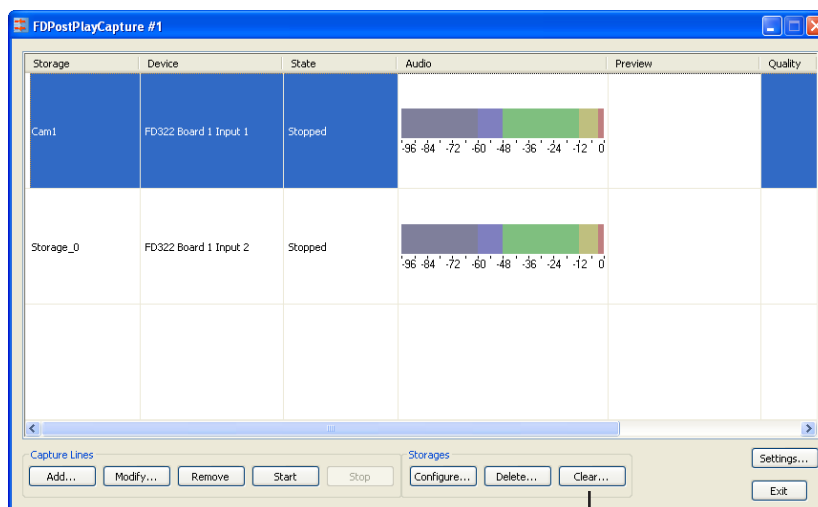




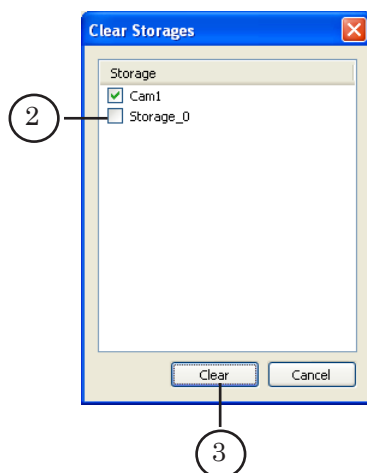
4.3. Clearing of Storage(s)

Complete the following to clear storage(s):

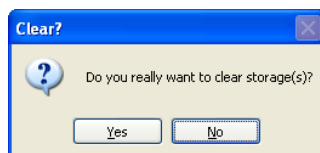
1. Click Clear... (1) in the Storages group.



2. The Clear Storages window appears.



3. Put marks (2) in lines with storage(s) that you want to clear.
4. Then click Clear (3). Confirmation message appears.



5. Click Yes to clear storage(s).

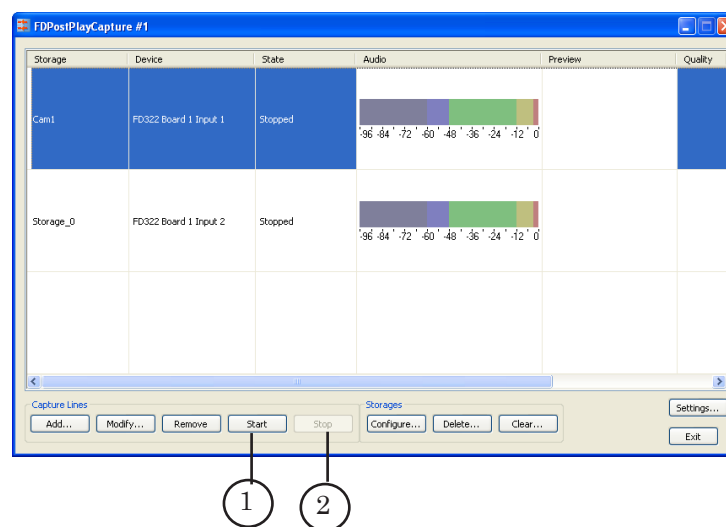


Data Input Into Storage(s)

1. Start/Stop of Data Input Into Storage(s)

Input of data into storage(s) is implemented by means of the buttons located in the Capture Lines group:

- Start (1) is used to start data input;
- Stop (2) is used to stop data input.



✓ **Important:** Data is input only after customizing of capture lines and storages.

You can start input of data in one of the following ways:

- by clicking Start (1) in the main program window;
- using command line with the -start key. The key is necessary for starting of data input into storage after program launch
(example: "C:\Program Files\ForwardT Software\PostPlay\FDPostPlayCapture.exe" -start).

Each capture line requires a license. Maximal number of lines depends on type of purchased product.

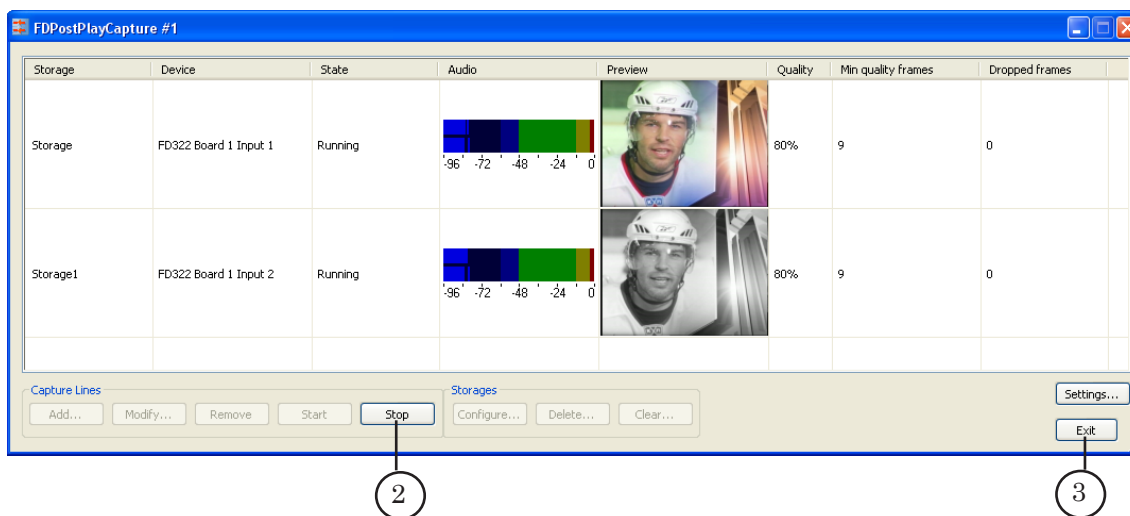
You can configure any number of capture lines. However, number of lines used for data input into storage can not exceed number of licenses. Otherwise when trying to start data input an error message appears.

Information on licenses is stored in a registration key. At key activation the information is put into PC Registry.

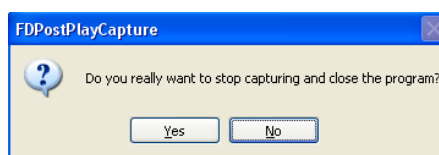


You can stop input of data in one of the following ways:

- by clicking Stop (2);



- by clicking Exit (3) in the main program window when exiting the program. The following message appears.



Click Yes. Data input into storage is stopped and the FPostPlayCapture program is closed.



2. Control Over Procedure of Data Input

The following information is displayed in columns of table with a list of capture lines when input of data is implemented:

Column	Information	Satisfied value
State	Current state of capture line	Running is displayed
Quality	Current quality of video data compression	Value must exceed minimal value of specified at customizing of a storage (the Codec Settings step).
Min quality frames	Number of frames with a minimal quality	Value must be close to zero. If there is another value then video data rate exceeds average data rate and there can be not enough of space on disk for storage, so it is impossible to store data of a specified duration
Dropped frames	Number of frames dropped at input	Value of this parameter must be 0. In other case probably: – PC performance is low; – hard disk is too fragmented or too slow
Audio	Sound volume indicators	
Preview	Preview images (are updated twice per second)	



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:

[PostPlay. Retransmitted Signal Delay Server. User's Guide](#)

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