ForwardT Software Package

Webcasting and Broadcast Archiving

Solutions based on
the Forward T Software Set and
Windows Media Encoder or
Adobe Flash Media Encoder

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User's Guide

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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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Table of Content

Introduction

You can broadcast your audio and video content to network without any additional costs by using the ForwardT Software set and a stream broadcasting application (Windows Media Encoder or Adobe Flash Media Encoder).

Note: This User's Guide is valid for newer versions of the programs of similar functionality as well.

Windows Media Encoder (WME) is intended to encode audio and video content and to distribute it to network in Windows Media formats. In addition, the encoder can store the audio and video content to a file of the appropriate format that allows it to be used for archiving the translation.

Note: Windows Media format is useful for archiving as such files are rather small and can be played back in any computer with Windows Media Player.

The Adobe Flash Media Encoder (FME) is intended to encode audio and video content and to distribute it to network in Flash Video format.

In the solution we propose to capture video and audio from input/output of a board (FD300/FD322/FD422) to WME/FME stream DirectShow filters from the ForwardT Software set are used.

This document provides information about:

- possible stream broadcast schemes using the ForwardT Software set and a stream broadcasting application (Windows Media Encoder or Adobe Flash Media Encoder);
- how to customize encoders for stream broadcasting;
- how to customize WME for archiving of the content being broadcasted.

Tip: The current Windows Media Encoder and Adobe Flash Media Encoder are available through the following links:
- Windows Media Encoder;
- Adobe Flash Media Encoder.

# Stream broadcasting schemes and general workflows for their realization

Here are two possible stream broadcasting schemes:

- Retranslation: signal reception and stream broadcasting to network without alterations or additions;
- Translation according to the schedule: signal reception and stream broadcasting (to television and/or computer network) according to the schedule you want to playback using the FDOnAir application.

1. Broadcasting without alterations

When broadcast is organized according to this scheme, the content may be received from an analog or SDI source and distribute to computer network without any alterations in the broadcast schedule.

The figure below presents this scheme.
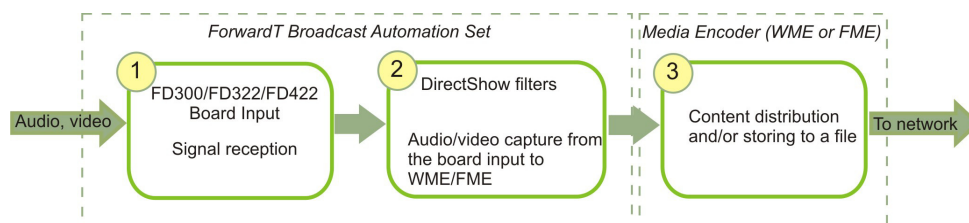
1. To capture the signal the FD300/FD322/FD422 board (1) is used.

Note: Both input lines of the board can be used simultaneously. Lines are designed as follows: Line A and Line B for FD300; Input 1 and Input 2 for FD322/FD422.

2. DirectShow filters from the ForwardT Software set (2) capture audio and video from board input to stream.

3. Media Encoder (WME/FME) processes the stream and transmits it to network (3). It is also possible to store the content to a file on the hard disk during the stream broadcasting.

To configure broadcast according to this scheme follow the steps below (for detailed information on each step see the appropriate subsections of this User's Guide; for more information on encoders, see their help files):

1. Connect sources of the signal to the board being used.

2. Configure the board parameters using the appropriate application:

- FDConfiguration for FD300 (see the <u>FDConfiguration – FD300 board settings User's Guide</u>);
- FDConfig2 for FD322/FD422 (see the FDConfig2 FDExt boards settings User's Guide).

3. If you use FD300, enable DirectShow filters from the ForwardT Software set using the FDConfiguration application.

   If you use FD322/422, DirectShow filters are enabled automatically when you finish board configuring in FDConfig2.

4. Set broadcast parameters in WME/FME.

   Specify a source: DirectShow filter capturing audio/video from the input line being used.

5. Launch broadcast in WME/FME.

2. Translation according to the schedule

Using this scheme, you can broadcast according to your own schedule. You can insert content from hard disk to the signal (analog or SDI) received from external source, titling, etc. It is possible to broadcast either to computer network (local or Internet) only or to computer and television network simultaneously.

The figure below presents this scheme.
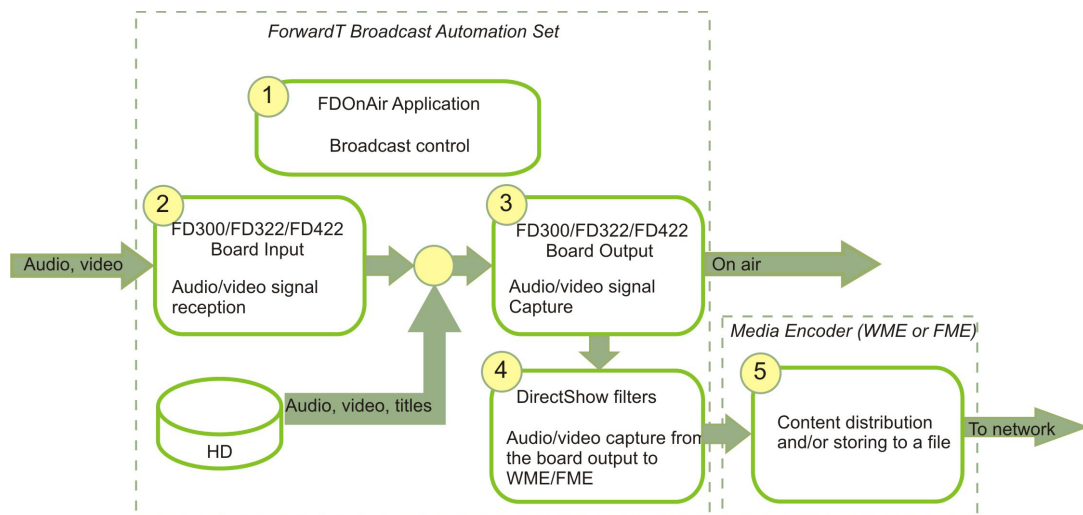
1. To manage the broadcast (scheduling, translation and broadcasting control) the FDOnAir application is used (1).

2. To capture, process and transmit audio and video to television network (3) the FD300/FD322/FD422 board is used (2).

3. DirectShow filters from the ForwardT Software set (2) capture audio and video from board output to stream.

4. Media Encoder (WME/FME) processes the stream and transmits it to network (5). It is also possible to store the content to a file on the hard disk during the stream broadcasting.

To configure broadcast according to this scheme follow the steps below (for detailed information on each step see the appropriate subsections of this User's Guide; for more information on encoders, see their help files):

1. Connect sources of the signal to the board being used.

2. Configure the board parameters using the appropriate application:
    - FDConfiguration for FD300 (see the FDConfiguration – FD300 board settings User's Guide);
    - FDConfig2 for FD322/FD422 (see the FDConfig2 FDExt boards settings User's Guide).

3. If you use FD300, enable DirectShow filters from the ForwardT Software set using the FDConfiguration application.
   If you use FD322/422, DirectShow filters are enabled automatically when you finish board configuring in FDConfig2.

4. Launch and configure the FDOnAir application and create a broadcast schedule (see the FDOnAir – Broadcast Automation and FDOnAir – Additional Sections User's Guides).

5. Set broadcast parameters in WME/FME.
   Specify a source: DirectShow filter capturing audio/video from the output line being used.

6. Start your schedule in the FDOnAir application.

7. Launch stream broadcast to network in WME/FME.

DirectShow filters (for the FD300 board)

This information is valid for the ForwardT Software 5.0.2 version and above for the FD300 board.

1. To enable DirectShow filters

✔ **Important:** Enable DirectShow filters before configuring stream broadcast in WME/FME. If any broadcasting program is opened (FDOnAir, WME/FME), close it.

1. Launch the FDConfiguration application using its shortcut on the desktop or by clicking Start: Programs > ForwardT Software > Board Setup > FD300 Configuration.

2. Select in the Boards' Indexes list (1) the board that is used for audio and video capture and click Advanced… (2).
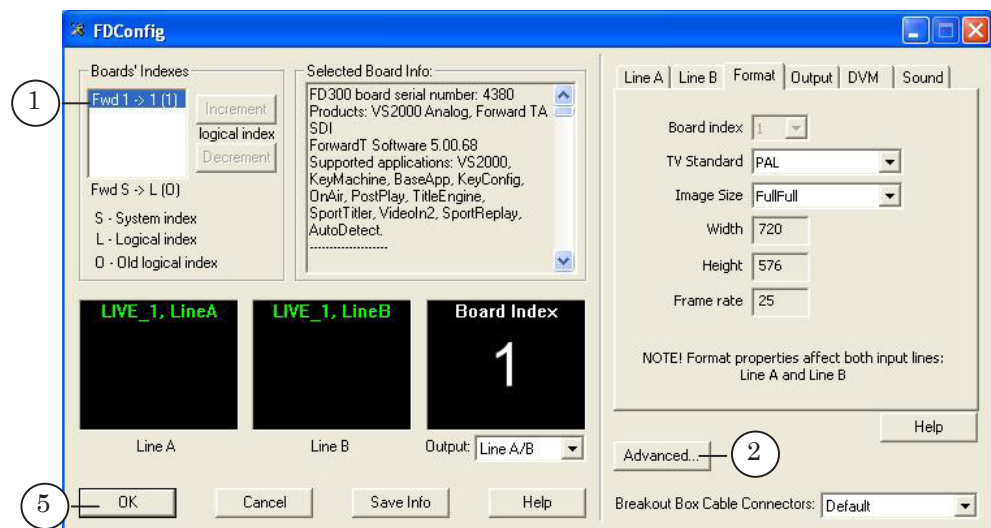
3. In the opened window select the A/V Capture filter check box. in the Use Direct Show filters group (3).
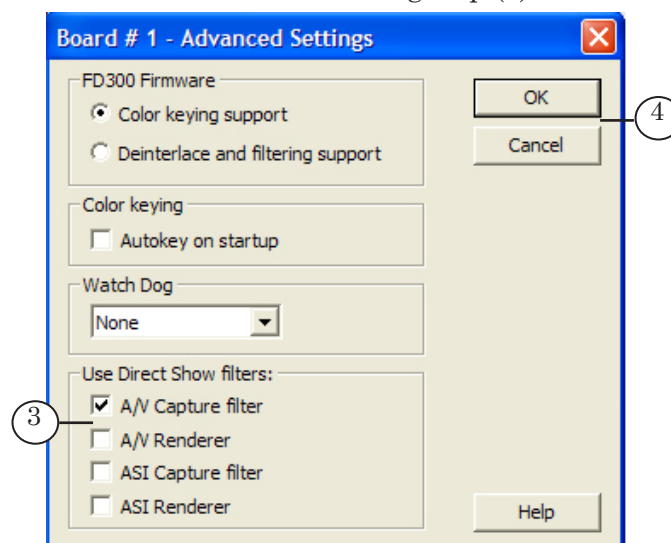
4. Click OK (4) to save the settings and to close the window.

5. In the main window click OK (5) to save the settings and exit FDConfiguration.

2. Names of filters

Table 1.   List of filters for FD300

Source		Device designation (N – board number, in most cases N=1)
Board	Line	
FD300	video input, Line A	SLTM DShow Video Capture boardN
	video input, Line B	SLTM DShow Video Line B Capture boardN
	video output	SLTM DShow Video Output Capture boardN
	audio input, line #1	FD300 Input 1 BN
	audio input, line #2	FD300 Input 2 BN
	audio input, line #3	FD300 Input 3 BN
	audio output, line #1	FD300 Output 1 BN
	audio output, line #2	FD300 Output 2 BN
	audio output, line #3	FD300 Output 3 BN

DirectShow filters (for the FD322/FD422 board)

This information is valid for the ForwardT Software 5.3.5xx beta version and above for the FD322/422 board.

If you use FD322/422, DirectShow filters are enabled automatically when you finish board configuring in FDConfig2 (mode selection and device enabling). What filters are available depends on the current configuration.

✔ **Important:** Enable DirectShow filters before configuring stream broadcast in WME/FME. If any broadcasting program is opened (FDOnAir, WME/FME), close it.

1. FD322/FD422 Configuration Setting

For more detailed information on FD322/FD422 Configuration Setting see the FDConfig2: FDExt boards settings User's Guide. This section presents steps on which list of available DirectShow filters depends.

1. Launch the FDConfig2 application using its shortcut on the desktop or by clicking Start: Programs > ForwardT Software > Board Setup > FDConfig2.

2. In the list (1) select the board being used for signal capture and translation.
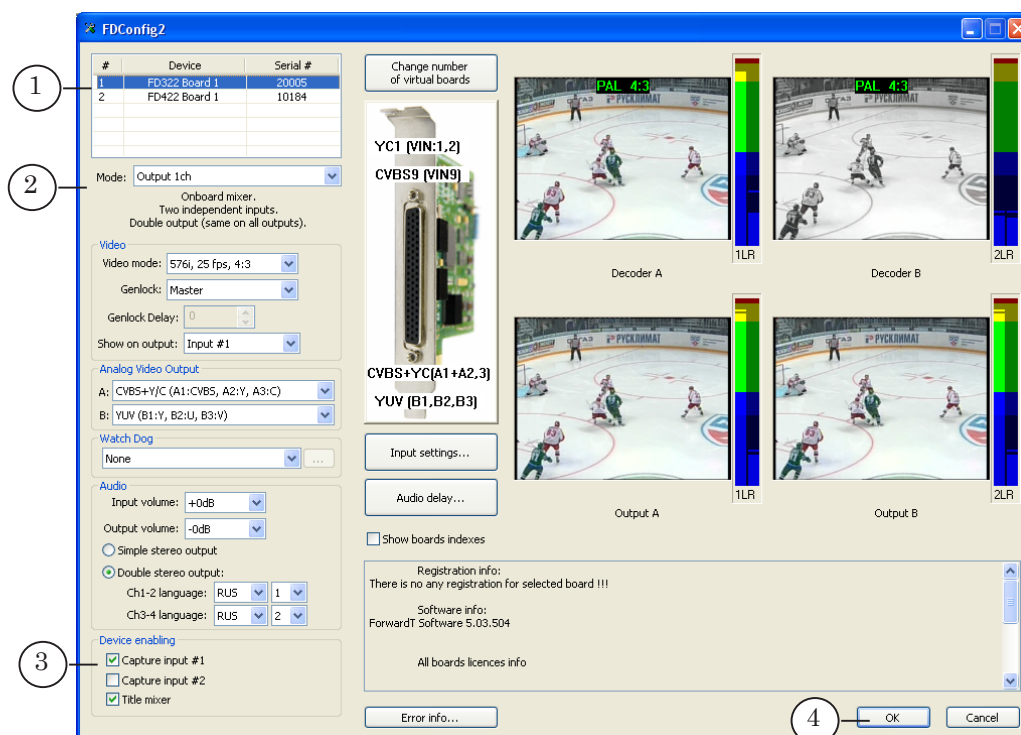
3. Make sure that in the Mode list (2) the required mode is selected.

✔ **Important:** When selecting mode, make sure that you have all necessary licenses.

4. Make sure that all required check boxes are selected in the Device enabling group (3). To capture audio/video to WME/FME stream from Input 1 select the Capture input #1 check box; to capture from Input 2 select the Capture input #2 check box. Capture from the board output is always enabled.

Note: Depending on board type and selected mode check boxes names can be slightly different.

✔ **Important:** When selecting the check boxes, be sure that all required licenses are available (for information on licenses for the product you bought, see its description).

For example, the product may include only one license for capturing from the board input. Thus, at one moment you can use either Capture Input #1 or Capture input #2 but not simultaneously.

If you have only one license and both check boxes of the Device enabling group are selected, only Capture Input #1 is enabled. If you need to capture audio/video from Input #2, deselect the Capture Input #1 check box and select Capture Input #2.

Note: Information on licenses is kept in registration key and recorded into Windows Registry when the key is activated. If there are several boards in the system all corresponding licenses for products are taken into account.

5. To save the settings and close the FDConfig2 program window click OK (4).

After applying the settings, the list of available DirectShow filters is formed. If the Capture Input #1/ Capture input #2 check box are selected, names of the appropriate DirectShow filters are displayed in WME/FME in the list of sources.

2. Names of filters

Names of DirectShow filters for the FDExt boards look like this:
Board_name Line_name Capture

where:

- Board_name denotes the system name of the board being used. E.g. FD322 Board 1, FD422 Board 2. The name indicates the board type and its number;
- Line_name denotes the board line from which audio/ video is captured. E.g. Input 1 Video is an input video line #1; Output Video is an output video line; Input Stereo 1 is an input stereo audio channel #1. Line name can include also the following indications:
  - Input/ Output denotes a line type: input or output;
  - index 1 or 2 denotes the number of the line (optional);
  - HD denotes high definition mode (optional);
  - Video/ Stereo 1/ Stereo 2 denotes type of the content: video or audio and stereo channel index (only for audio).
- Capture denotes the type of filter.

Table 2.   List of filters for FDExt boards

Source		Device designation (N – board number, in most cases N=1)
Board	Line	
FD322	Input 1 video line	FD322 Board N Input 1 Video Capture
	Input 2 video line	FD322 Board N Input 2 Video Capture
	video output (for one channel mode)	FD322 Board N Output Video Capture
	Output 1 video line (for two separate channels mode)	FD322 Board N Output 1 Video Capture
	Output 2 video line (for two separate channels mode)	FD322 Board N Output 2 Video Capture
	audio input, Stereo channel 1LR	FD322 Board N Input Stereo 1 Capture
	audio input, Stereo channel 2LR	FD322 Board N Input Stereo 2 Capture
	audio output, Stereo channel 1LR	FD322 Board N Output Stereo 1 Capture
	audio output, Stereo channel 2LR	FD322 Board N Output Stereo 2 Capture
FD422	Input 1 video line	FD422 Board N Input 1 Video Capture
	Input 2 video line	FD422 Board N Input 2 Video Capture
	Input 1 video line for HD-SDI mode	FD422 Board N Input HD Video Capture
	video output (for one channel mode)	FD422 Board N Output Video Capture
	video output for HD-SDI mode	FD422 Board N Output HD Video Capture
	Output 1 video line (for two separate channels mode)	FD422 Board N Output 1 Video Capture

| Source | | Device designation |
Board	Line	(N – board number, in most cases N=1)
	Output 2 video line (for two separate channels mode)	FD422 Board N Output 2 Video Capture
	stereo channel #1 from SDI signal from Input 1 line	FD422 Board N Input 1 Stereo 1 Capture
	stereo channel #2, Input 1	FD422 Board N Input 1 Stereo 2 Capture
	stereo channel #1, Input 2	FD422 Board N Input 2 Stereo 1 Capture
	stereo channel #2, Input 2	FD422 Board N Input 2 Stereo 2 Capture
	stereo channel #1, Output (for one channel mode)	FD422 Board N Output Stereo 1 Capture
	stereo channel #2, Output (for one channel mode)	FD422 Board N Output Stereo 2 Capture
	stereo channel #1, Output 1 (for two separate channels mode)	FD422 Board N Output 1 Stereo 1 Capture
	stereo channel #2, Output 1	FD422 Board N Output 1 Stereo 2 Capture
	stereo channel #1, Output 2	FD422 Board N Output 2 Stereo 1 Capture
	stereo channel #2, Output 2	FD422 Board N Output 2 Stereo 2 Capture
FDVrt	video output	FDVrt Device N Output Video Capture
(virtual board)	stereo channel #1, output	FDVrt Device N Output Stereo 1 Capture
	stereo channel #2, output	FDVrt Device N Output Stereo 2 Capture
	stereo channel #3, output	FDVrt Device N Output Stereo 3 Capture

Launching and configuring FDOnAir

The FDOnAir application is used when broadcasting according to your own schedule.

For more information on working with the application, see the FDOnAir – Broadcast Automation and FDOnAir – Additional Sections User's Guides.

1. Launch the FDOnAir application using its shortcut on the desktop or by clicking Start: Programs > ForwardT Software > OnAir.

2. Click Settings (1).
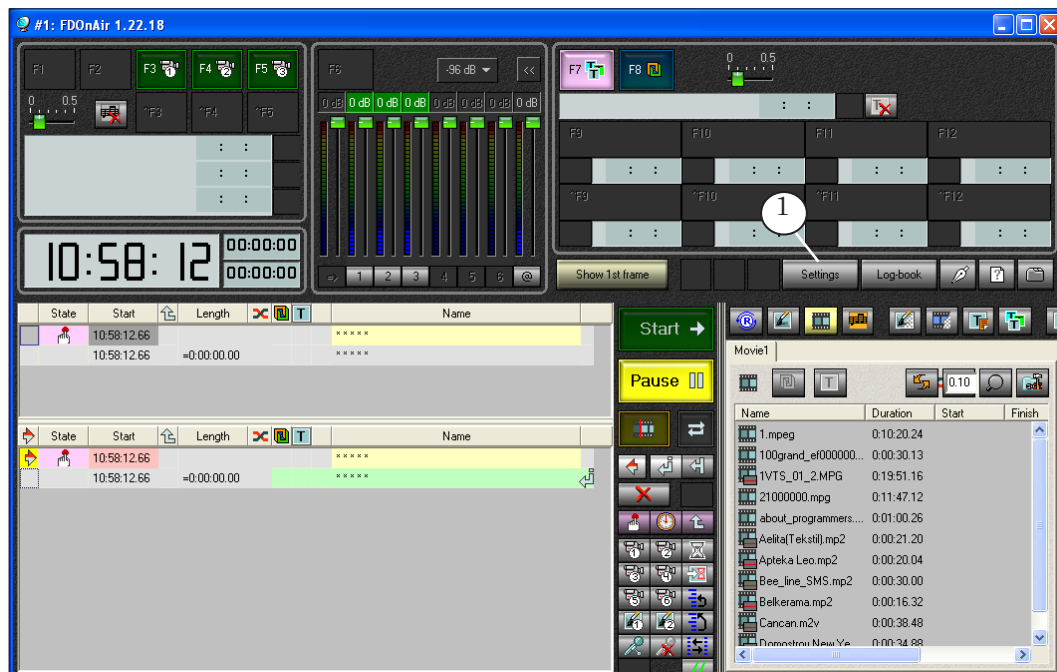
3. In the opened window select the Configuration tab (2).

4. In the drop-down lists of the Video device group select the following:
   - device type (3):
     - FD300 for the FD300 board;
     - FDExt for the FD322/FD422 board;
   - name of the line/board being used for broadcasting (4). The name looks like this:
     - BoardN for the FD300 board;
     - FD322 Board N Output K for the FD322 board;

- FD422 Board N Output K for the FD422 board;

Where N denotes the board number and K denotes the line number (optional).
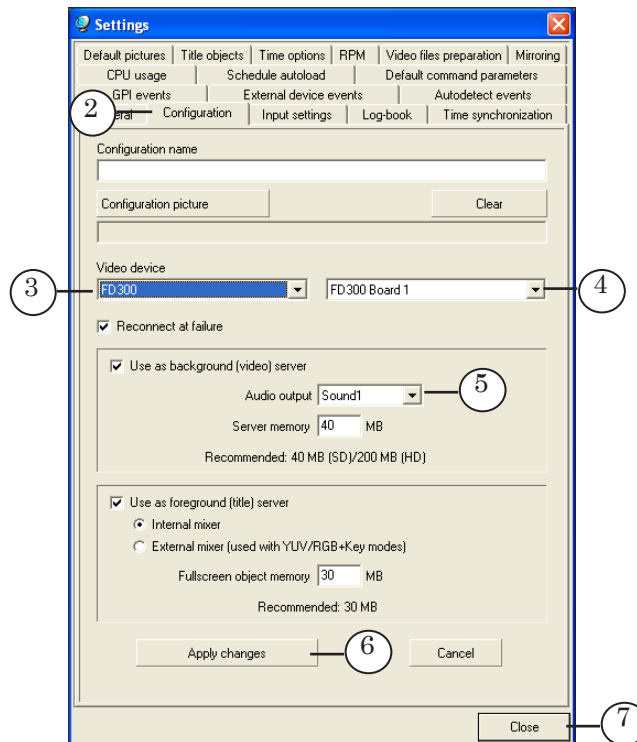
5. If you use the FD300 board, in the Audio output drop-down list (5) select audio line on the FD300 board being used as sound output.

6. Click Apply changes (6) to validate the adjusted settings. Click Close (7) to exit the settings window.

Workflow in WME

This section provides information about how you can use WME (Windows Media Encoder) for broadcasting to network using the ForwardT Software set.

✿   **Tip:** For more information on WME, see its user's guide.

1. General workflow for broadcast setting and control

1. Launch WME using its shortcut on the desktop or by clicking Start: Programs > Windows Media > Windows Media Encoder.

2. If the New session dialog box appears, deselect Show this dialog box at startup (1) and click Cancel (2).
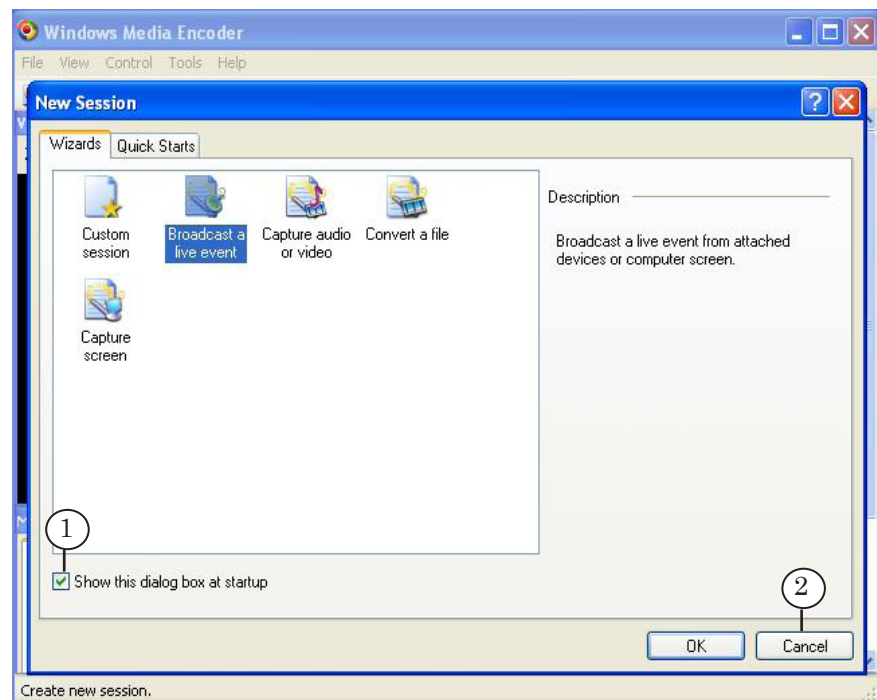
3. Open the Options window using Tools > Options... (3).
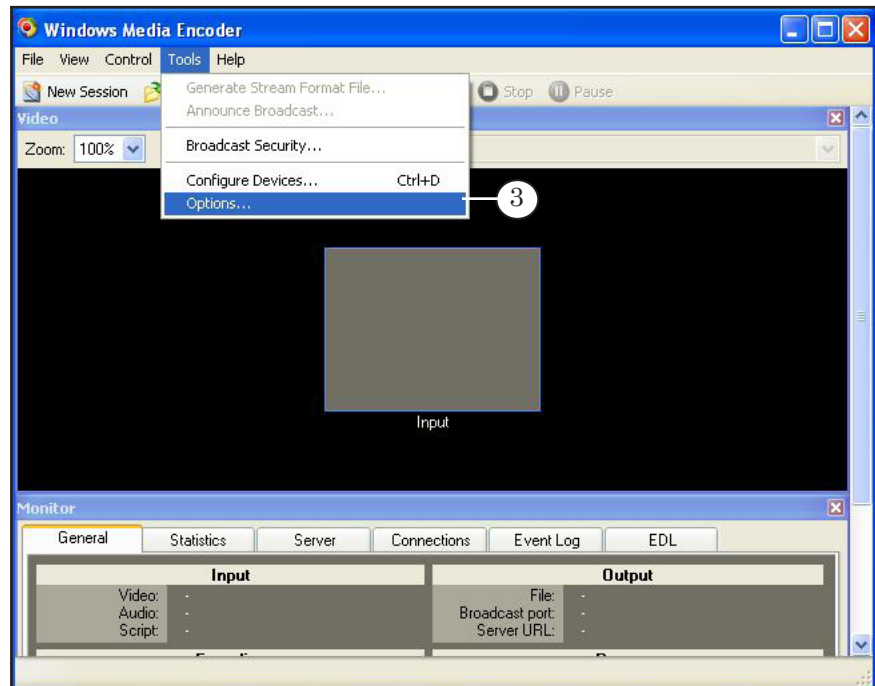
4. Select the required TV standard on the General tab in the
   Default video format group (4).
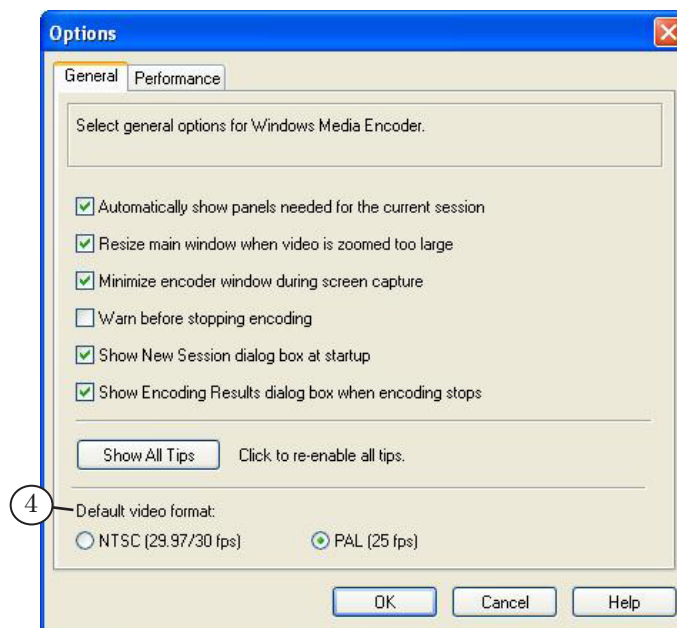
5. To customize the session open the Session Properties panel: click Properties (5) on the toolbar (or click View > Properties Panel).

    For the 6-9 steps use the Session Properties panel.
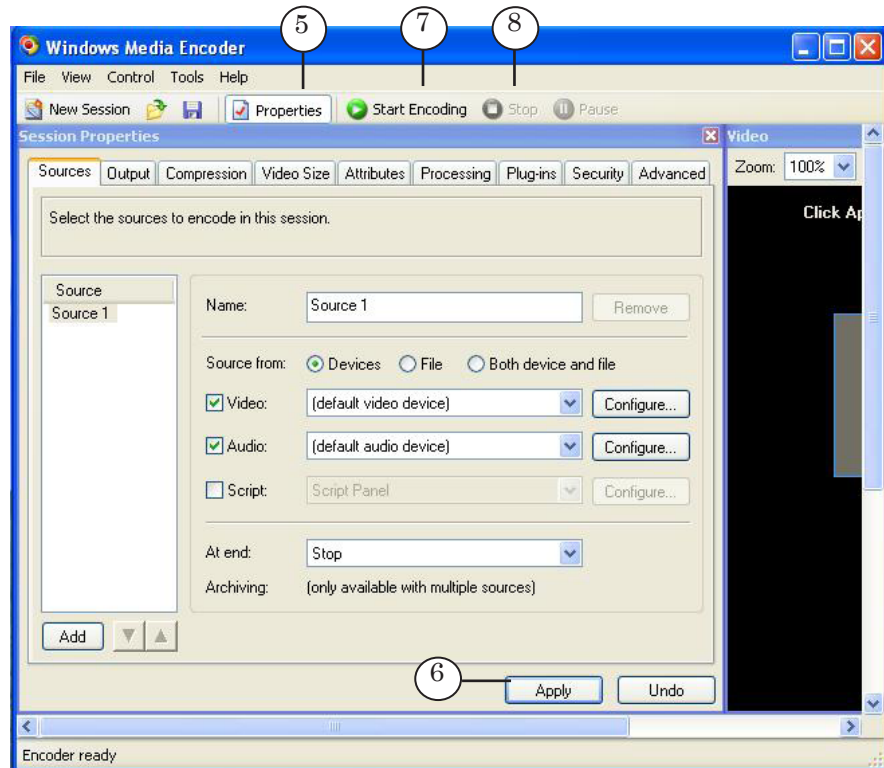
6. Specify sources of your audio and video content on the Sources tab:
    - See Specifying and configuring sources of your audio and video content for retranslation;
    - See Specifing and configure sources of your audio and video content for translation according to the schedule.

7. Set content distribution parameters on the Output tab (see the relevant section below).

8. Set the encoding parameters for your content on the Compression tab (see the relevant section below).

9. Click Apply (6) to validate the settings adjusted during steps 6-8.

10. To start the broadcast click Start Encoding (7).

11. To stop the broadcast click Stop (8).

2. Specifying and configuring sources of your audio and video content for retranslation

1. You can specify and configure sources of your audio and video content on the Sources tab (1) on the Session properties panel.

2. Select the Devices radio button on the Source from radio button group (2).
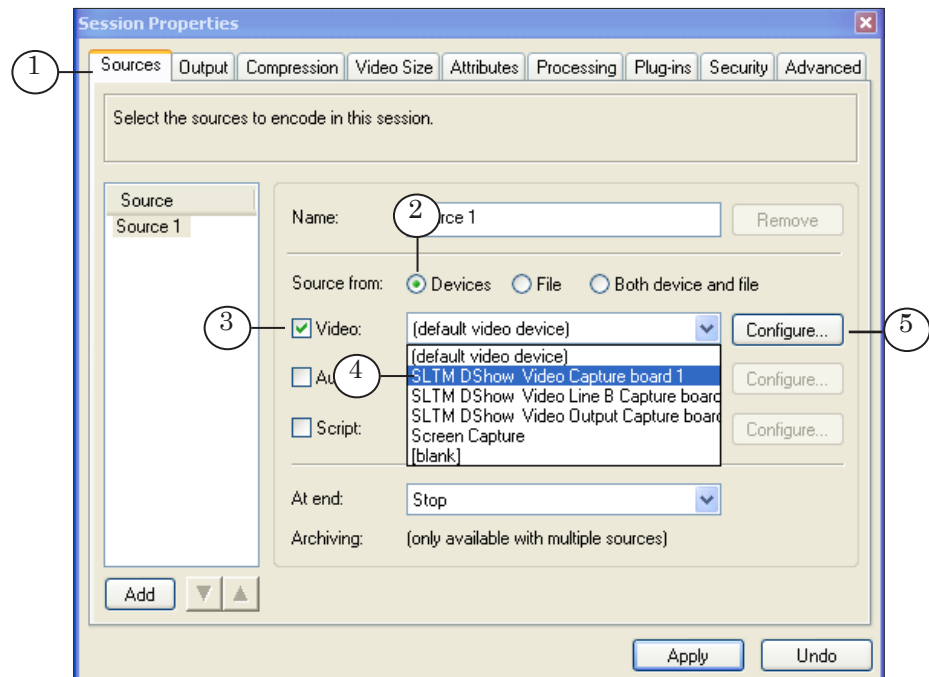
3. Select the Video check box (3) and in the drop-down list on the right (4) select the DirectShow filter capturing video from the *input* line of the board being used. E.g.:
    - SLTM DShow Video Capture board1 for Line A of the FD300 board #1;
    - SLTM DShow Video Line B Capture board1 for Line B of the FD300 board #1;
   - FD322 Board 1 Input 2 Video Capture for the Input 2 video line of the FD322 board #1.

    For more information on naming and list of filters see in the sections dedicated to DirectShow filters above.

4. Click Configure… (5) to open the device properties window. Make sure that required values of the parameters are selected.

5. Select the Audio check box (6) and in the drop-down list on the right (7) select the DirectShow filter capturing audio from the *input* line of the board being used. E.g.:

- FD300 Input 1 B1 for audio input #1 of the FD300 board #1;
- FD322 Board 1 Input Stereo 1 Capture for the 1L and 1R audio input lines (the 1st stereo channel) of the FD322 board #1.

For more information on naming and list of filters see in the sections dedicated to DirectShow filters above.
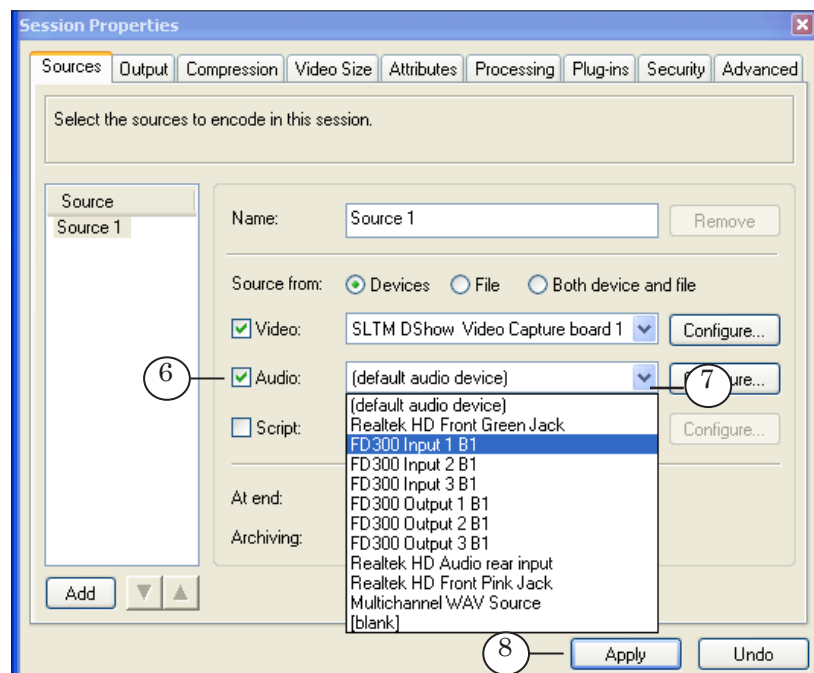
6. Click Apply (8) to validate the settings.

3. Specifying and configuring sources of your audio and video content for translation according to the schedule

1. You can specify and configure sources of your audio and video content on the Sources tab (1) on the Session properties panel.

2. Select the Devices radio button on the Source from radio button group (2).
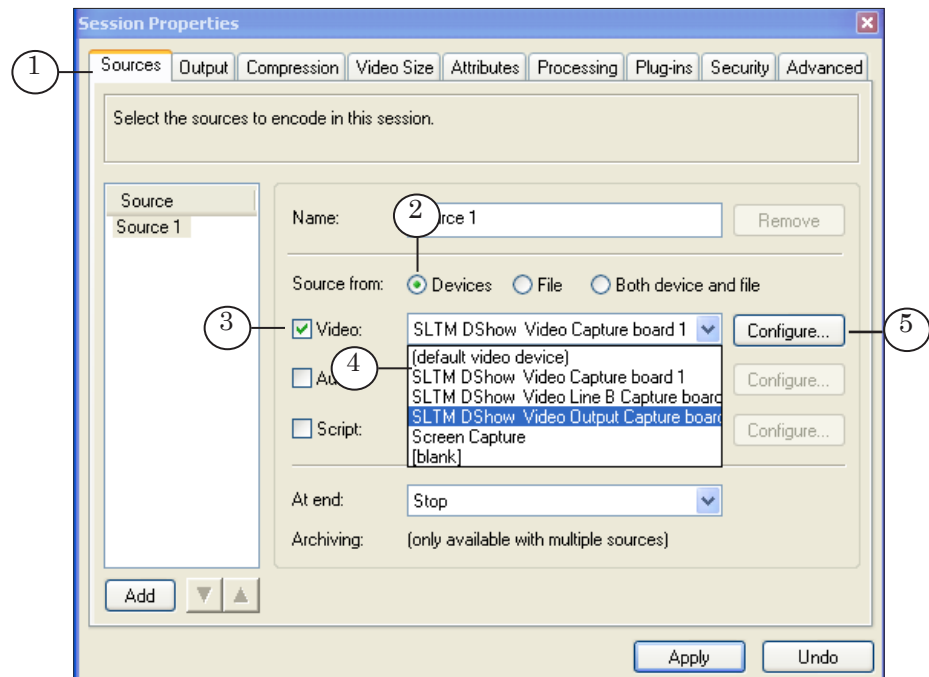
3. Select the Video check box (3) and on the drop-down list (4) select the DirectShow filter capturing video from the *output* line of the board being used (chosen for broadcasting in FDOnAir, see point 4 of the Launching and configuring FDOnAir section). E.g.:

   - SLTM DShow Video Output Capture board1 for output of the FD300 board #1;
   - FD322 Board 1 Output Video Capture for the output of the FD322 board #1.

   For more information on naming and list of filters see in the sections dedicated to DirectShow filters above.

4. Click Configure… (5) to open the device properties window. Make sure that required values of the parameters are selected.

5. Select the Audio check box (6) and in the drop-down list (7) select the DirectShow filter capturing audio from the *output* line of the board being used. E.g.:

    - FD300 Output 1 B1 for audio output #1 of the FD300 board #1(the board and line numbers is to be selected during configuration; for more information see point 5 of the Launching and configuring FDOnAir section);
    - FD322 Board 1 Output Stereo 2 Capture for the 2L and 2R audio output lines (the 2nd stereo channel) of the FD322 board #1.

    For more information on naming and list of filters see in the sections dedicated to DirectShow filters above.
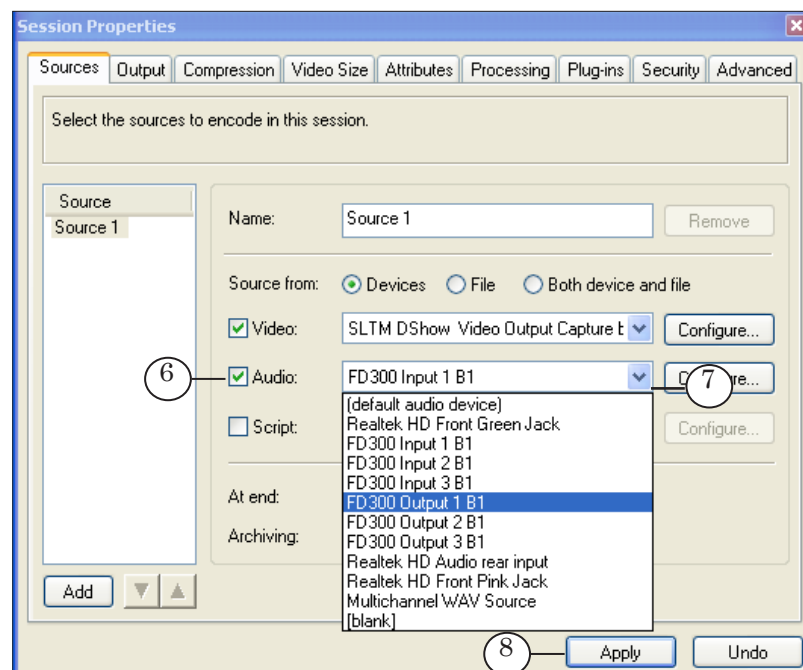
6. Click Apply (8) to validate the settings.

4. Setting content distribution parameters

1. Open the Output tab (1) on the Session Properties panel.

2. Select how you want to distribute the content you want to encode by activating one of the check boxes:

   - Push to server (2) – if you want the content distribution to be initialized by WME. In this case, enter the following:

     - Server name – Windows Media server address;
     - Publishing point – publishing point name;
     - Copy settings from – name of the publishing point from which you want to copy the settings for new publishing point;

   - Pull from encoder (3) – if you want the content distribution to be initialized by server (or servers).

     In this case, specify the port number for content distribution in the Port number text box. To find automatically the free port number click Find Free Port.
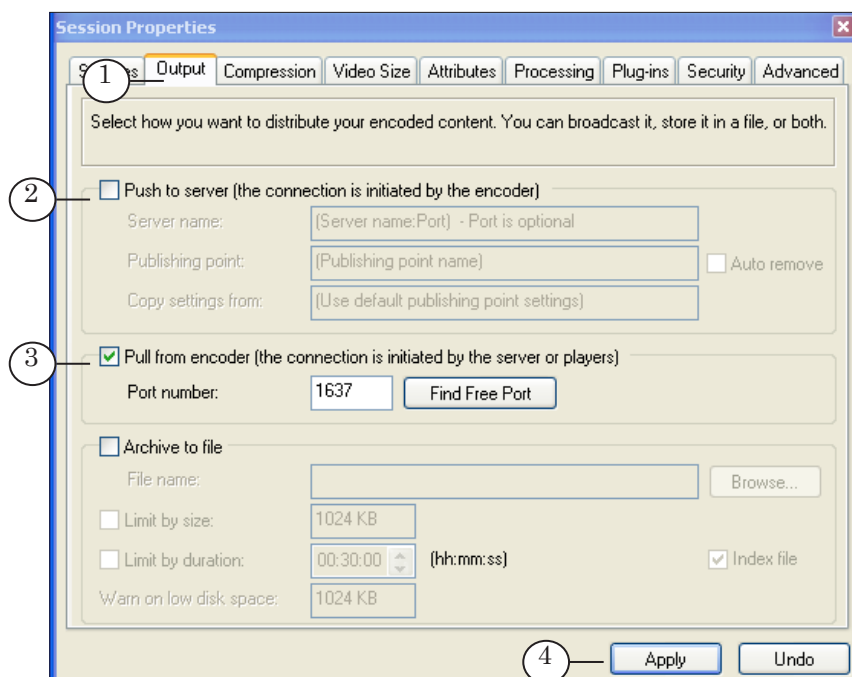
3. Click Apply (4) to validate the settings.

✿ **Tip:** Report the connection parameters (the port number and the IP-address of the broadcasting server if you chose to distribute the stream directly from WME, or Windows Media server address if you chose to distribute the stream to the server) to the clients.

5. Setting encoding parameters

1. You can set the stream encoding parameters on the Compression tab (1) on the Session Properties panel.

2. Specify the settings configuration in the Destination drop-down list (2).
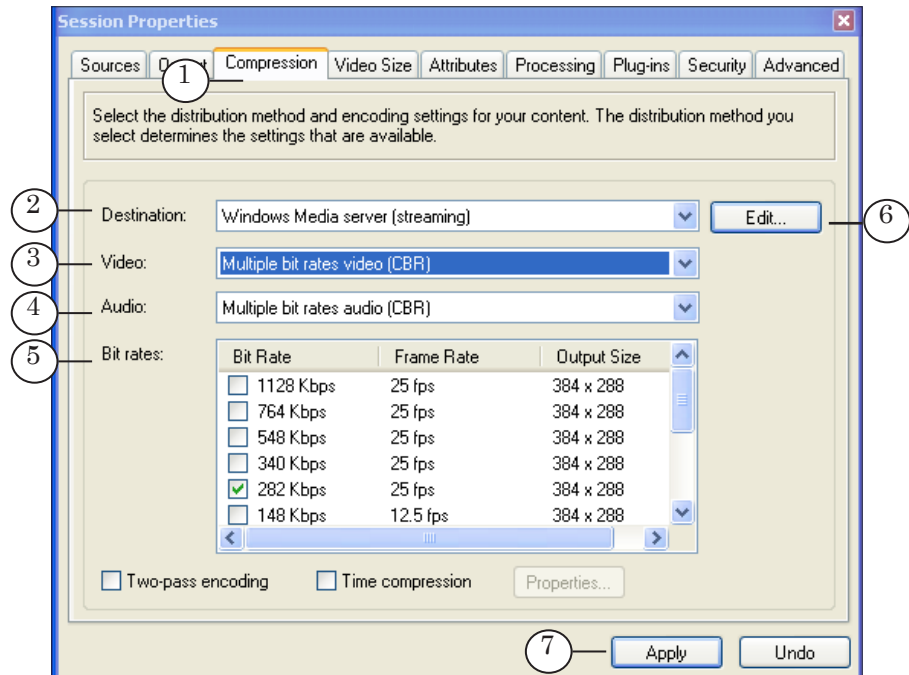
3. Information on current parameters values is displayed in the following lists:

   - Video (3) – image compression parameters;
   - Audio (4) – sound compression parameters;
   - Bit rates (5) (Kbps).

4. If it is necessary to edit the selected configuration or create a new one, open the properties editing window by clicking Edit… (6) or select necessary value on the Video, Audio and Bit rates lists.

5. Click Apply (7) to validate the settings.

Archiving broadcast using WME

To archive the content being broadcasted you can use the built-in WME function that allows storing the content to a Windows Media file. Content may be stored during broadcasting to network or independently.

For customizing the storing of the content being broadcasted follow the same workflow as for broadcast setting and control (see the Workflow in WME section).

On the Output tab (1) on the Session Properties panel follow the additional steps below:
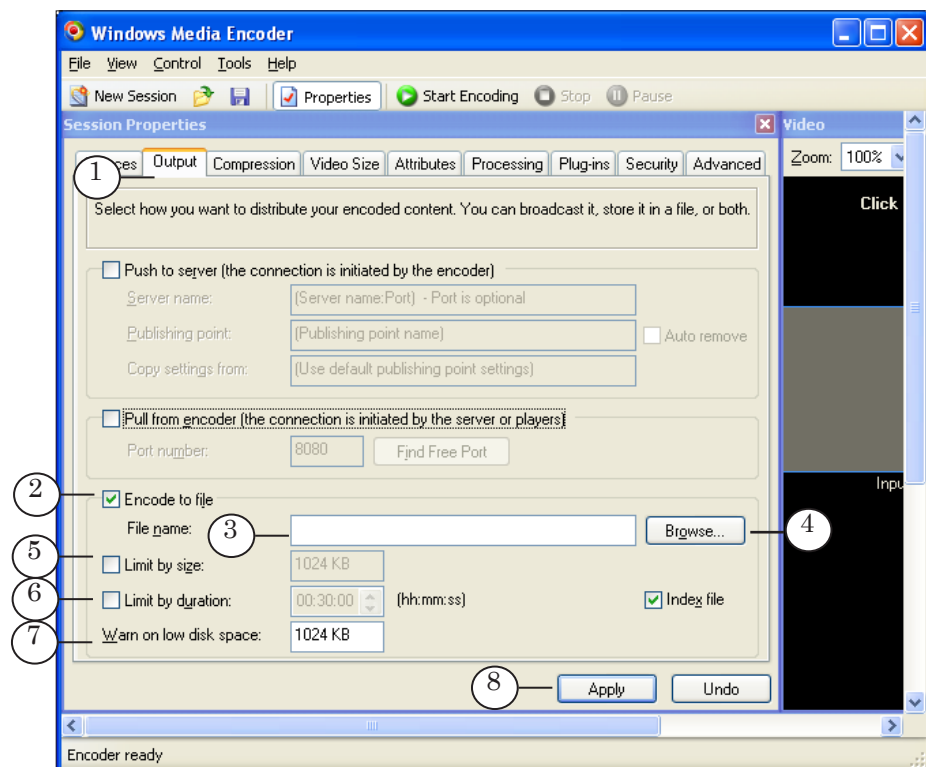
1. Select the Encode to file check box (2).

    If you chose to store content during broadcasting (i.e. one of the Push to server or Pull from encoder check boxes located on the same tab is selected) the check box is called Archive to file.

2. Enter to the File name text box (3) the full path to the file where you want to store broadcasted content. Click Browse… (4) to open the default browse dialog box.

3. If you need to limit the size of the file being stored, select the Limit by size check box (5) and enter the maximum allowable file size to the text box on the right.

4. If you need to limit the duration of the file being stored, select the Limit by duration check box (6) and specify the maximum allowable duration in the HH:MM:SS format.

5. Enter to the text box (7) the limit of the minimum allowable free space on the hard drive. When free space on the hard drive reaches this minimum a message that there is not enough space appears.

6. Click Apply (8) to validate the settings.

Example of broadcast to network using WME

Let us consider an example of WME use for broadcasting to network based on the ForwardT Software set (the FD300 board). For examination of content being broadcasted to network we will use Windows Media Player.

Tip: For more information on WME, see its user's guide.

Let we have the FDOnAir application customized to broadcast according to a schedule. For broadcasting we use the FD300 board #1 (1). For sound output we have selected the Sound1 board audio output (2).
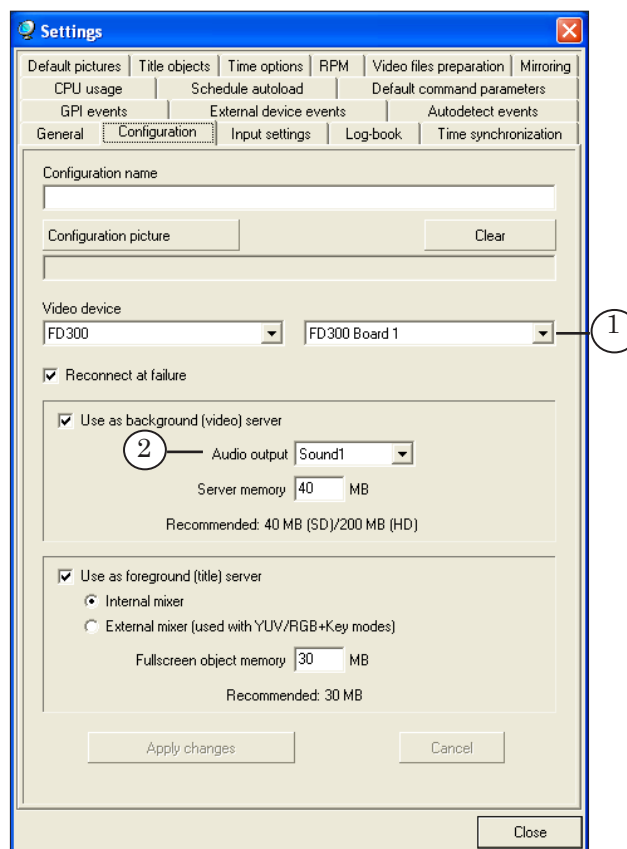
To customize and launch broadcast to network follow these
steps:

1. Make sure that DirectShow filters are enabled for the
   FD300 board #1. To do this, launch the FDConfiguration
   application (the FDOnAir application must be closed) and do
   the following:
   - In the Boards' Indexes list select the FD300 #1 board;
   - Click Advanced…;
   - Make sure that the A/V Capture filter check box (1) is
     selected on the Board #1 Advanced Settings window.
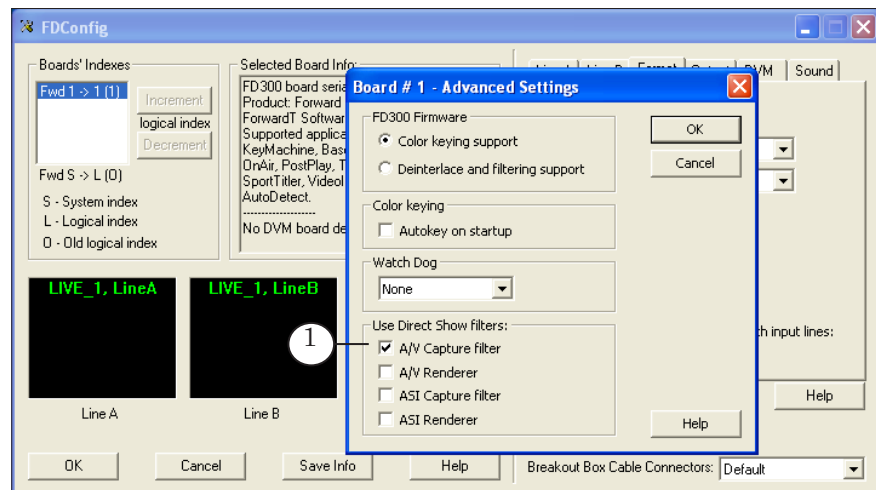
2. Launch WME (2) by clicking Start: Programs > Windows Media >
   Windows Media Encoder.

3. Click Properties (3) on the toolbar to open the Session Proper-
   ties panel.
   Steps 4-7 are to be followed on the Session Properties panel.
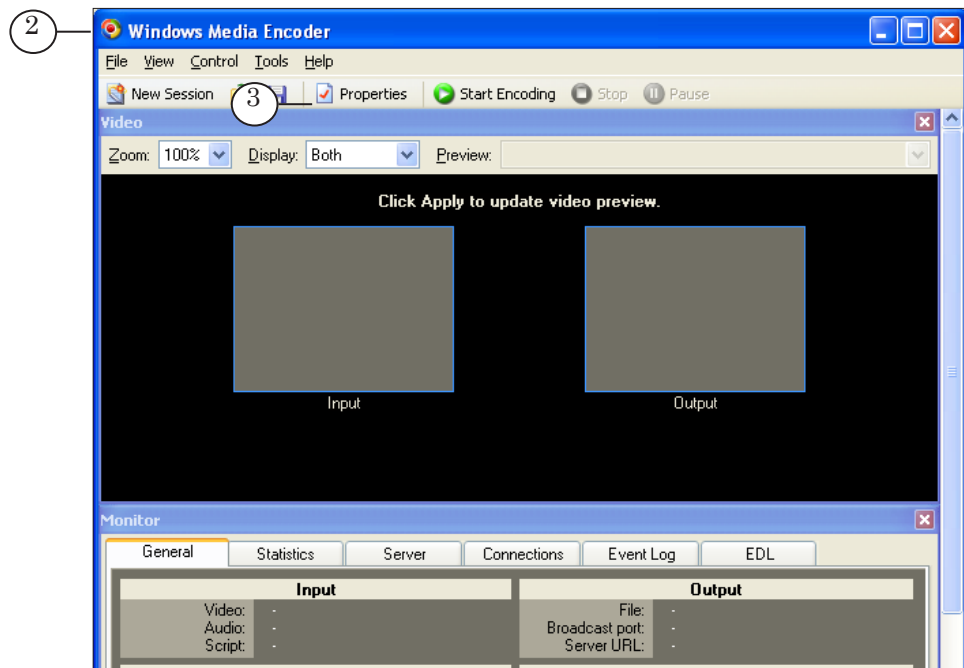
4. On the Sources tab (4) do the following:
   - Select the Devices radio button (5);
   - Select the Video check box (6), select the SLDTM DShow Output Capture board1 video device on the drop-down list on the right (7);
   - Select the Audio check box (8), select the FD300 Output 1B1 audio device on the drop-down list on the right (9).
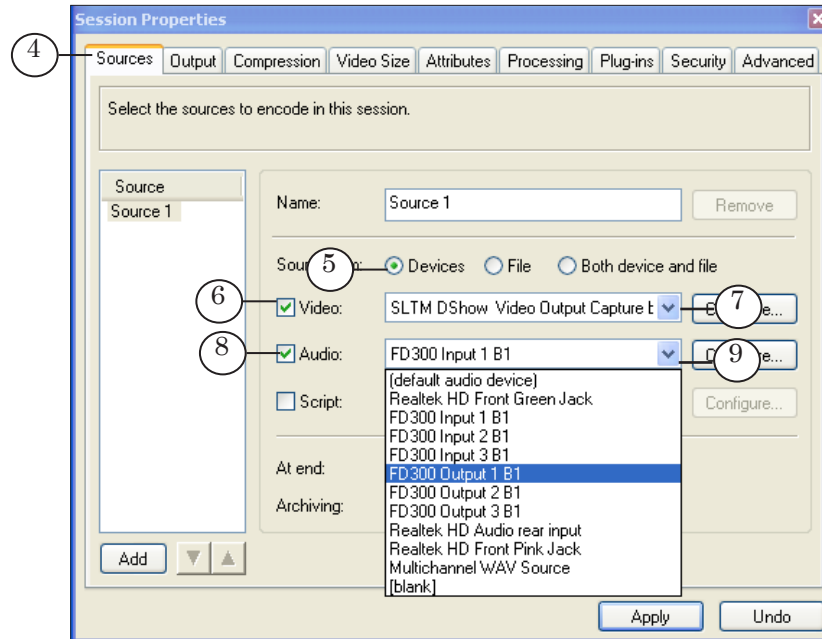
5. On the Output tab (10) do the following:
   - Select the Pull from encoder check box (11);
   - Click Find Free Port (12) to find a free port number automatically. Found number is displayed in the Port number field (13).
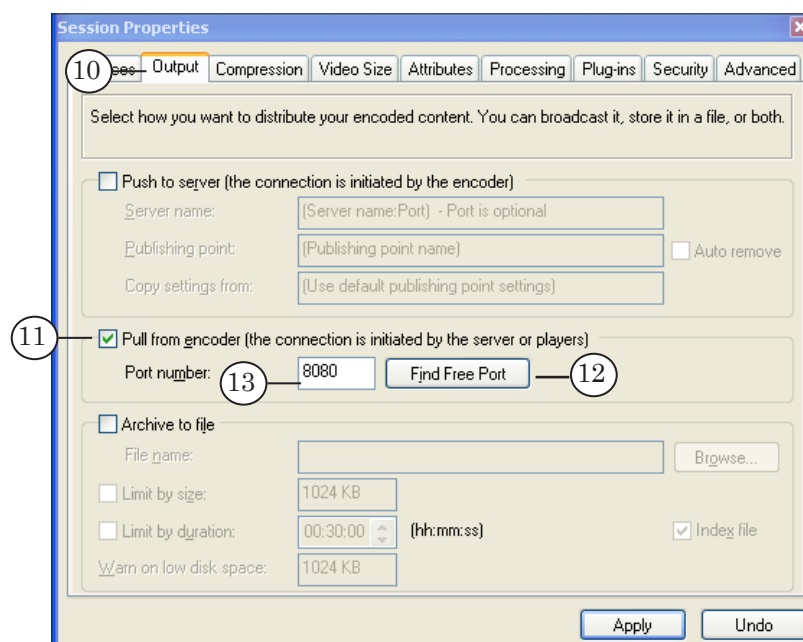
6. Specify the broadcast settings configuration in the Destination drop-down list (15) on the Compression tab (14).
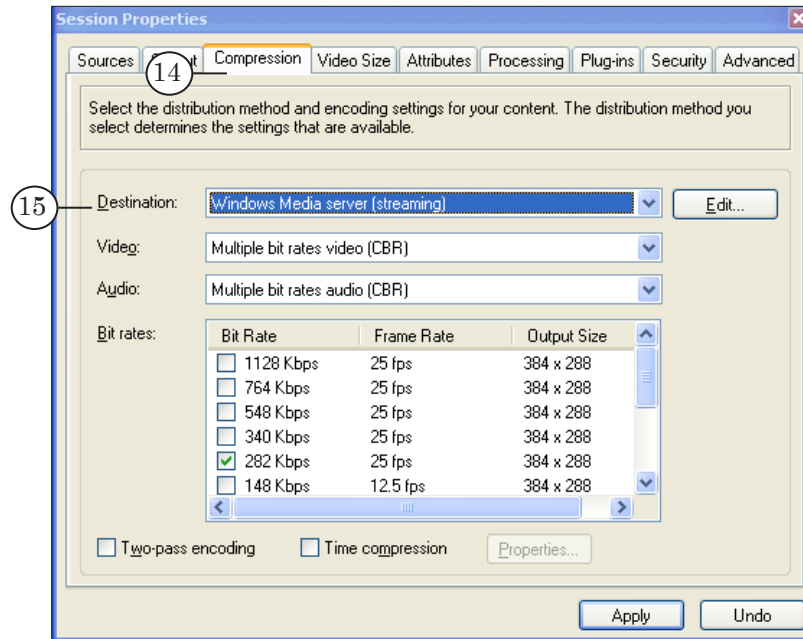
7. Click Apply (16) to validate the adjusted settings. Click the close button (17) to exit the settings window.
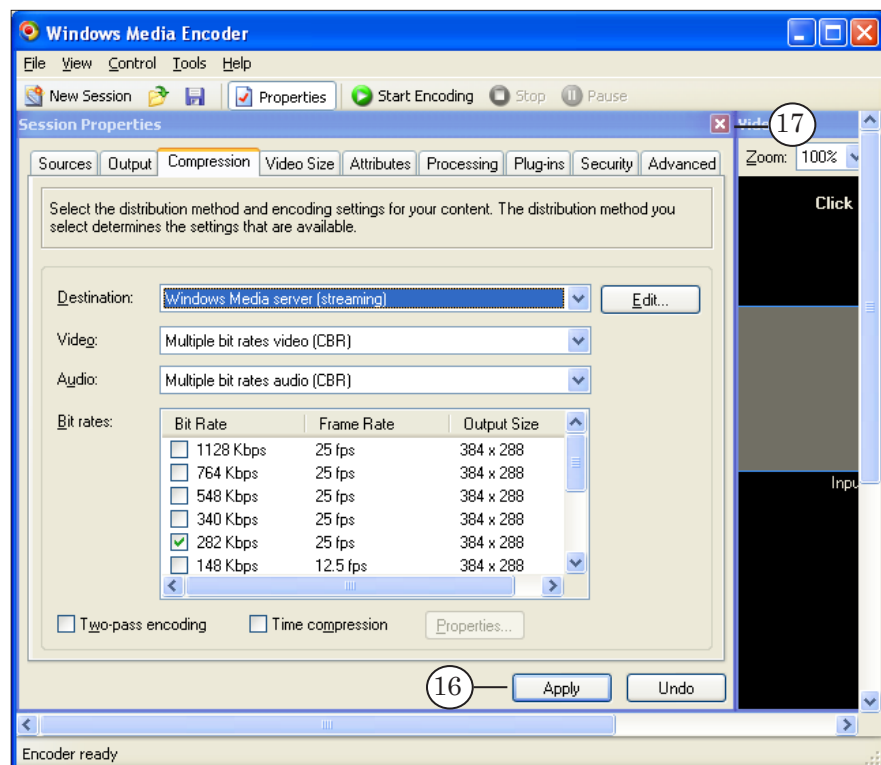
8. Click Start Encoding (18) on the toolbar to start stream broadcast to network.
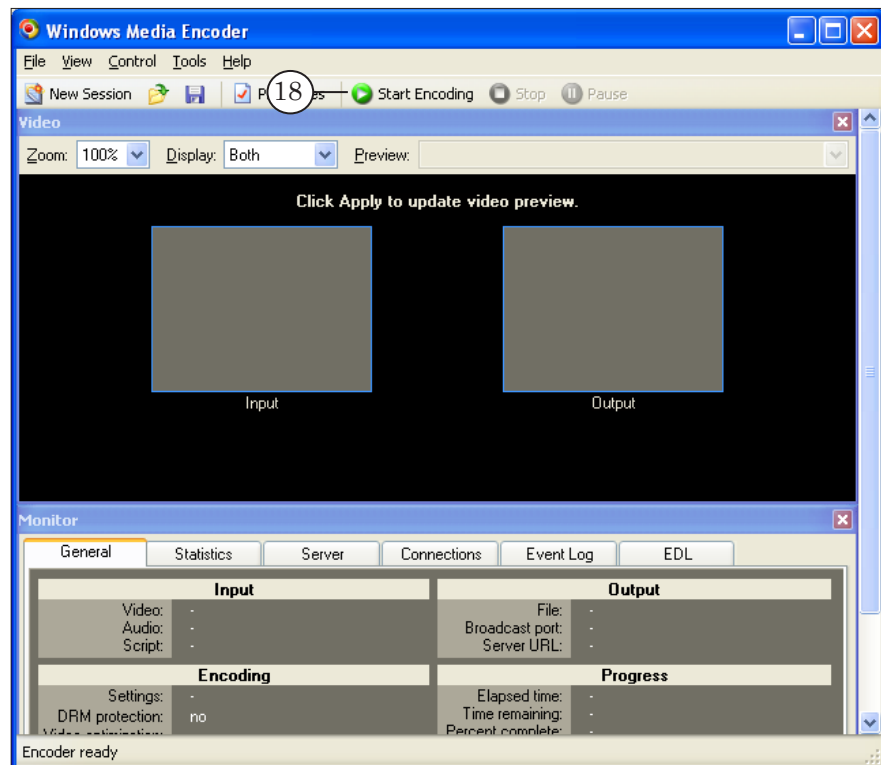
9. Click Start (19) to start the schedule playback.

10. Launch Windows Media Player.

11. Open the dialog box to connect with the stream by clicking
    File > Open URL... (20).
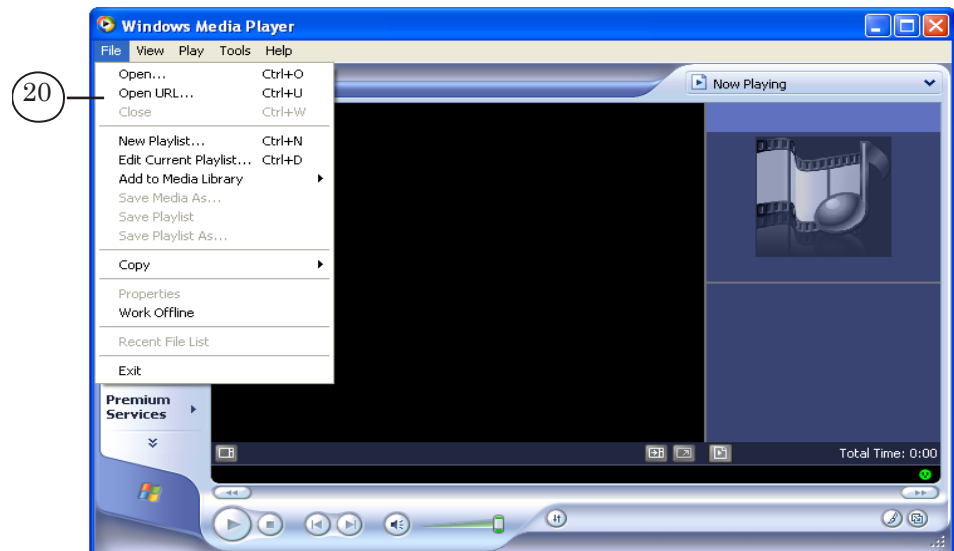
12. In the Open URL window (21) enter the broadcasting server
    URL and click OK.
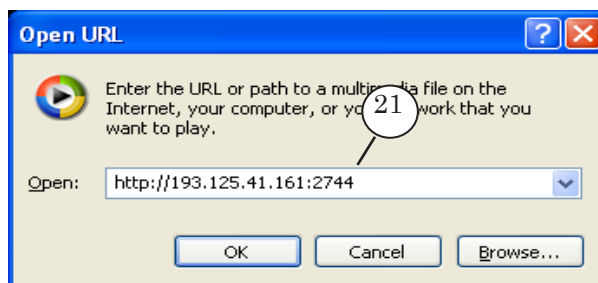
The address line looks like this:

    http://IP-address:port number

where:

- IP-address denotes the broadcasting server IP-address;
- : is an obligatory separator;
- port number denotes the broadcasting server port
  number (see Step 5).

13. In the Windows Media Player window content will be displayed according to the schedule being played back in the FDOnAir.
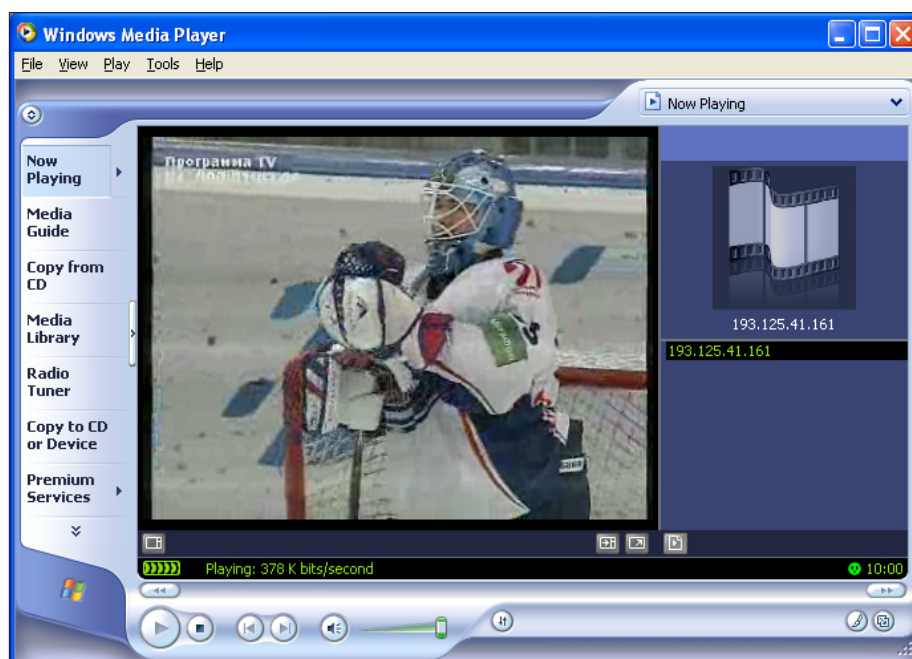
☼ **Tip:** To see the computer IP-address open a command prompt window by clicking Start: Programs > Accessories > Command Prompt. In the command prompt window type ipconfig and press Enter. The network configuration details will appear in the window, including IP address (1).

Workflow in FME

This section provides information about how you can use the FME (Adobe Flash Media Encoder) when broadcasting to network using the ForwardT Software set.

⚙ **Tip:** For more information on FME, see the help files of the encoder.

1. General workflow for broadcast setting and control

1. Launch FME using its shortcut on the desktop or by clicking Start: Programs > Adobe > Adobe Flash Media Encoder.

2. Customize the session on the Encoding Options panel (1): steps 4–7.

3. Use ▼ / ▲ to minimize/maximize the panel (2).
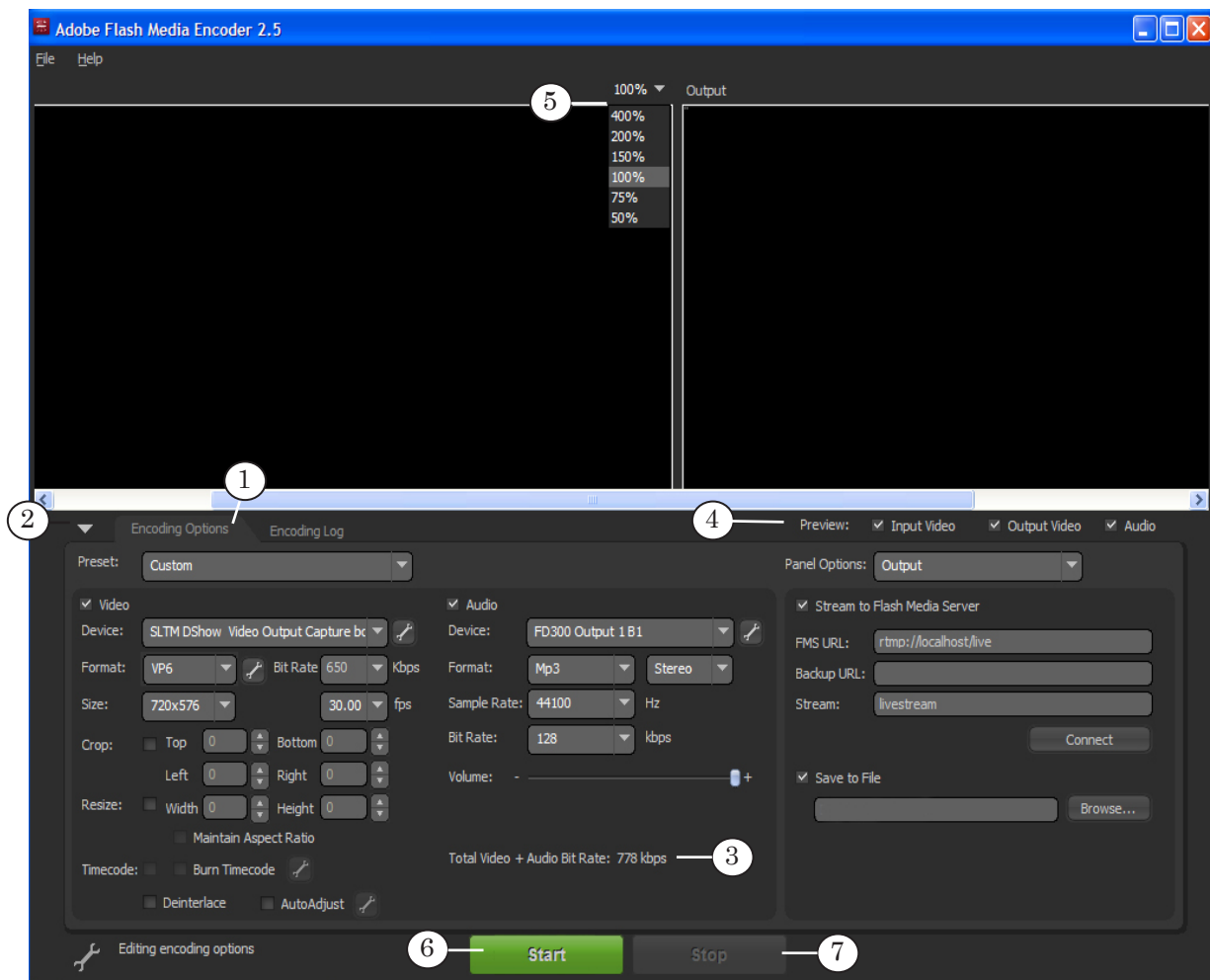
4. Specify sources of your audio and video content:
    - See Specifying and configuring sources of your audio and video content for retranslation;
    - See Specifying and configuring sources of your audio and video content for translation according to the schedule.

5. Set the parameters of stream distribution (see the relevant section below).

6. Set the content encoding parameters (see the relevant section below).

7. Audio and video bit rate according to the current settings are displayed in the Total Video+Audio Bit Rate field (3).

8. Select the following check boxes in the Preview group (4) to display the relevant information in the preview window:
    - Input Video;
    - Output Video;
    - Audio – input audio stream.

9. Select the preview window size in the Preview Size drop-down list (5).

10. To start the broadcast click Start (6).

11. To stop the broadcast click Stop (7).

2. Specifying and configuring sources of your audio and video content for retranslation

1. You can specify and configure sources of your audio and video content on the Encoding Option tab (1) on the settings panel.

2. Select the Video check box. In the Device drop-down list (1) specify the relative DirectShow filter capturing video from the *input* line of the board being used as the source of your video content.
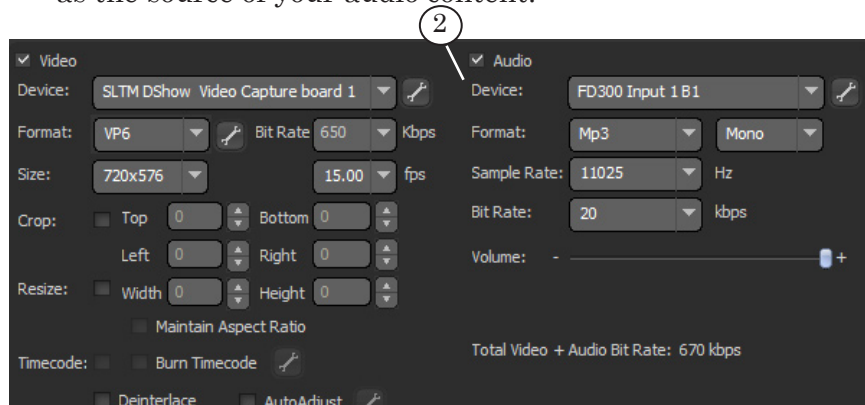

E.g.:
- SLTM DShow Video Capture board1 for Line A of the FD300 board #1;
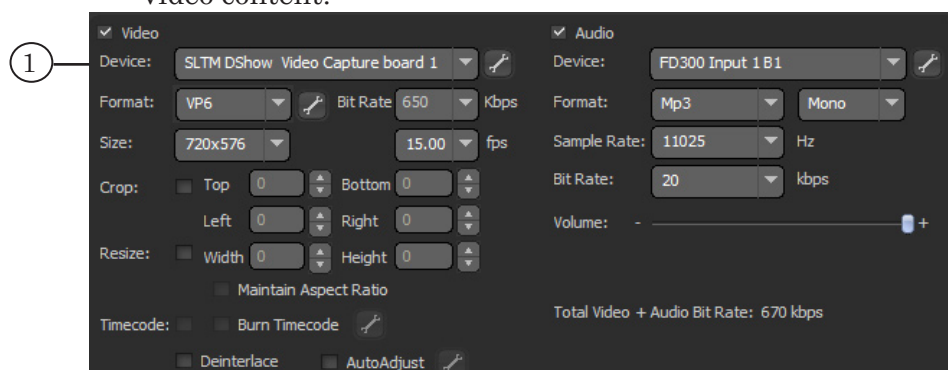
- SLTM DShow Video Line B Capture board1 for Line B of the FD300 board #1;
- FD322 Board 1 Input 2 Video Capture for the Input 2 video line of the FD322 board #1.

For more information on naming and list of filters see in the sections dedicated to DirectShow filters above.

3. Select the Audio check box. In the Device drop-down list (2) of the Audio group specify the relative DirectShow filter capturing audio from the *input* line of the board being used as the source of your audio content.


E.g.:
- FD300 Input 1 B1 for audio input #1 of the FD300 board #1;
- FD322 Board 1 Input Stereo 1 Capture for the 1L and 1R audio input lines (the 1st stereo channel) of the FD322 board #1.

For more information on naming and list of filters see in the sections dedicated to DirectShow filters.

3. Specifying and configuring sources of your audio and video content for translation according to the schedule

1. You can select and configure sources of your audio and video content on the Encoding Option tab (1) on the settings panel.
2. In the Device drop-down list (1) of the Video group specify the relative DirectShow filter capturing video from the *output* line of the board being used (chosen for broadcasting in FDOnAir, see point 4 of the Launch and configuring FDOnAir section) as the source of your video content.
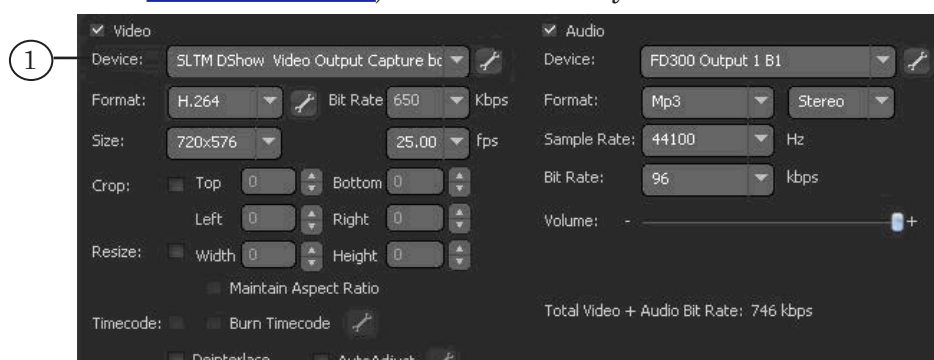
E.g.:

- SLTM DShow Video Output Capture board1 for output of the FD300 board #1;
- FD322 Board 1 Output Video Capture for the output of the FD322 board #1.

For more information on naming and list of filters see in the sections dedicated to DirectShow filters above.

3. In the Device drop-down list (2) of the Audio group specify the relative DirectShow filter capturing audio from the *output* line of the board being used as the source of your audio content. E.g.:

- FD300 Output 1 B1 for audio output #1 of the FD300 board #1(the board and line numbers are to be selected during configuration; for more information see point 5 of the Launch and configuring FDOnAir section);
- FD322 Board 1 Input Stereo 2 Capture for the 2L and 2R audio output lines (the 2nd stereo channel) of the FD322 board #1.

For more information on naming and list of filters see in the sections dedicated to DirectShow filters above.
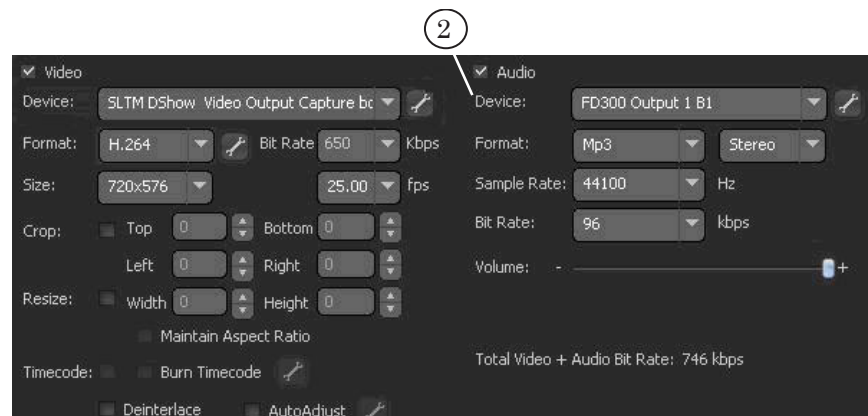
4. Setting content distribution parameters

1. Select the Stream to Flash Media Server check box (1) in the Panel Options group.

2. Specify the connection to the Flash Media Server parameters in the following text boxes:
   - FMS URL (2): Flash Media Server URL address;
   - Backup URL (3): backup Flash Media Server URL address;
   - Stream (4): stream name.

3. Click Connect (5) to connect to Flash Media Server.
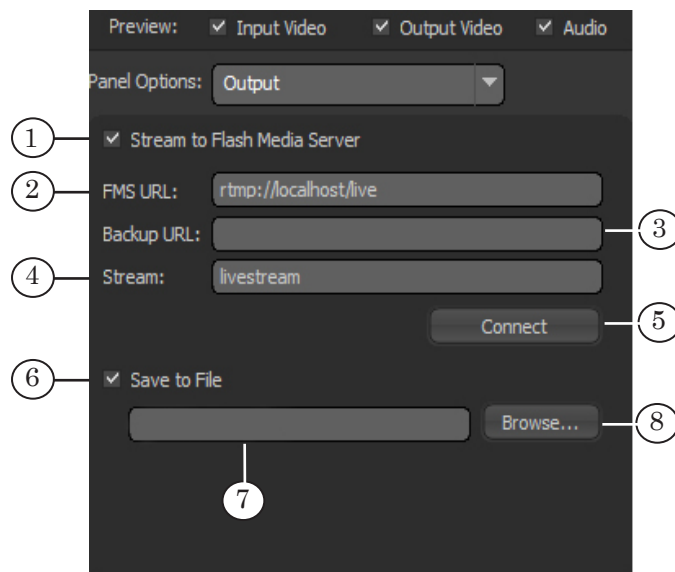
4. If needed, select the Save to File check box (6) and specify the full path to the file in the text box (7) to store your content to a file during its distribution.

   Click Browse… (8) to open the default browse dialog box.

5. Setting encoding parameters

1. You can set the stream encoding parameters on the Encoding options tab.

2. Select the required configuration in the Preset drop-down list (1).

    The configuration defines the following parameters: audio and video codec, bit rate, image size and frame frequency, sound reproduction mode (mono/stereo) and sample rate.
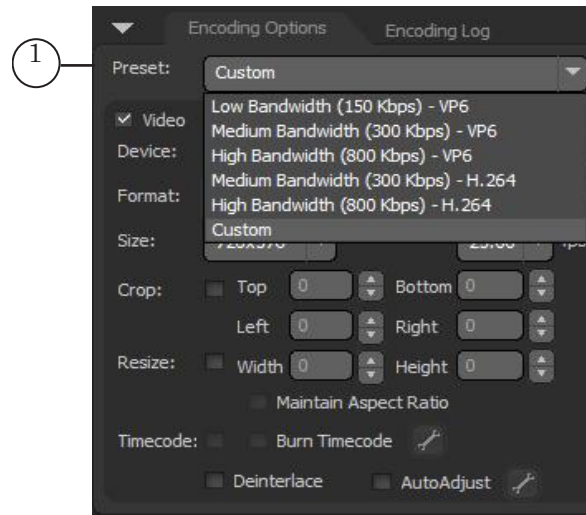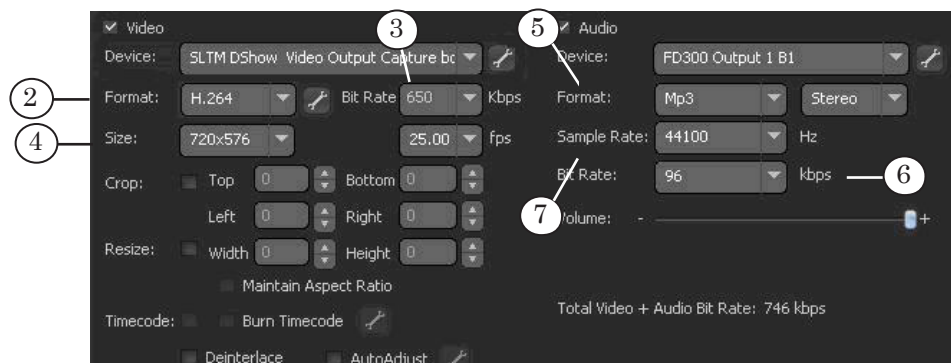

If you need to customize a nonstandard configuration, select Custom in the list and specify the required parameters.
In the Video group specify the following:

- Format (2) – video codec name;
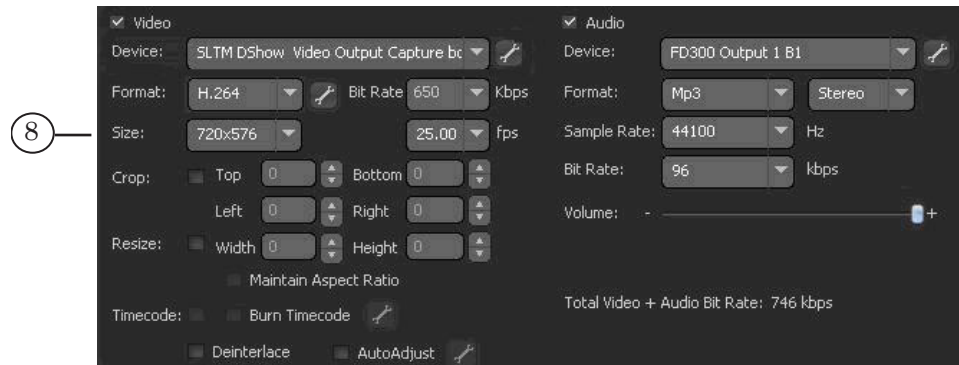- Bit Rate (3);
- Size (4) – image size and frame frequency.

In the Audio group specify the following:

- Format (5) – audio codec name and sound reproduction mode;
- Bit Rate (6);
- Sample Rate (7).

3. Select frame size and required frame frequency using the Size group drop-down lists (8). Frame size can be 720x576 only.

4. Select the Resize check box (9), if you need to change the size of the image being broadcasted. Specify the size using the Width and Height boxes.
Select the Maintain Aspect Ratio check box (10) if you need to keep the image proportions during scaling.
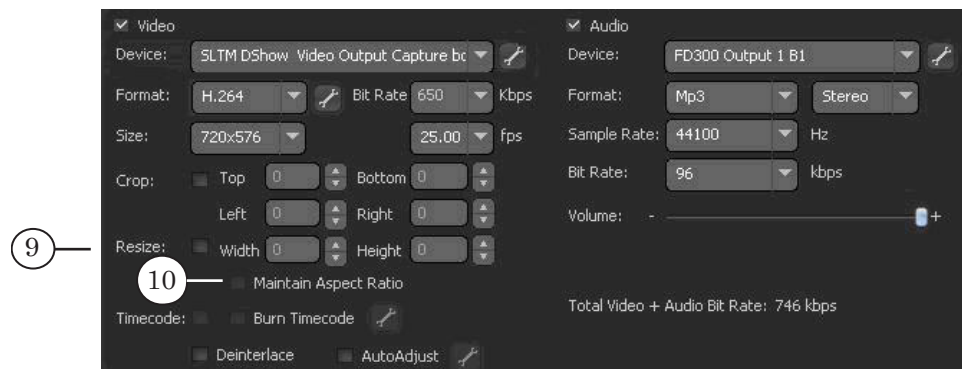
5. Specify the volume level by moving the Volume slider.
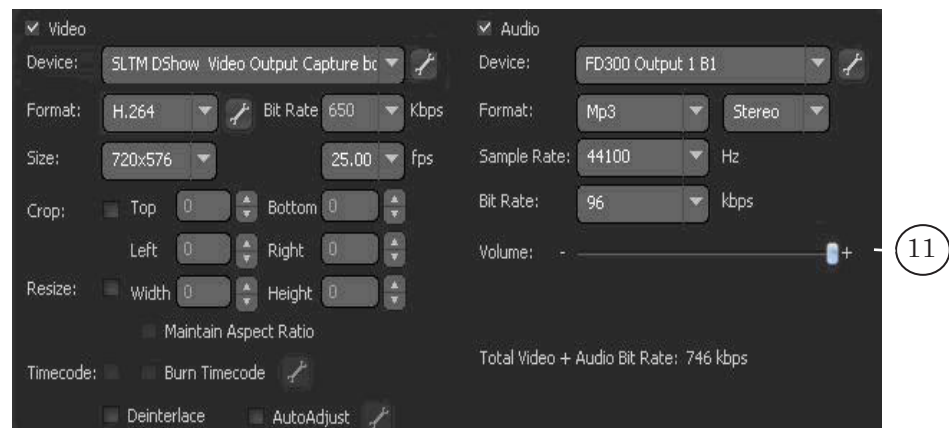
Useful Links

Forward T Product Line: Description, Software Delivery, Documentation, Ready Solutions

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

Support

http://www.softlab-nsk.com/forward/support.html

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

forward@softlab-nsk.com

Forum

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

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