

# **Open Broadcaster Software Studio**

## **(MultiPlatform)**

## **Help Guide**

(app. v 0.14.2)

16 May 2016

# Contents

<a href="#"><u>Introduction</u></a> .....	<b>5</b>
<a href="#"><u>Welcome</u></a> .....	5
<a href="#"><u>Installing OBS Studio</u></a> .....	5
<a href="#"><u>Getting started</u></a> .....	5
<a href="#"><u>Using online Forum</u></a> .....	6
<a href="#"><u>An Overview of Open Broadcaster Software Studio</u></a> .....	<b>7</b>
<a href="#"><u>Work more efficiently</u></a> .....	7
<a href="#"><u>Enjoy unlimited creative options</u></a> .....	7
<a href="#"><u>What's New in OBS Studio</u></a> .....	<b>9</b>
<a href="#"><u>Stay free</u></a> .....	9
<a href="#"><u>Stay competitive</u></a> .....	9
<a href="#"><u>Work fast and accurate</u></a> .....	10
<a href="#"><u>Looking at the Work Area</u></a> .....	<b>11</b>
<a href="#"><u>Getting familiar with the work area</u></a> .....	11
<a href="#"><u>About the work area</u></a> .....	11
<a href="#"><u>Using menu bar</u></a> .....	11
<a href="#"><u>Creating Scenes in OBS Studio</u></a> .....	<b>17</b>
<a href="#"><u>About scenes and layers (OBS Studio)</u></a> .....	17
<a href="#"><u>Getting started</u></a> .....	17
<a href="#"><u>Full screen preview</u></a> .....	20
<a href="#"><u>Scene transitioning</u></a> .....	21
<a href="#"><u>Getting Sources into OBS Studio</u></a> .....	<b>25</b>
<a href="#"><u>About video and audio sources</u></a> .....	25
<a href="#"><u>About video resolution and audio sample rate</u></a> .....	25
<a href="#"><u>Add new video source to OBS Studio scene</u></a> .....	26
<a href="#"><u>Full screen preview (source)</u></a> .....	31
<a href="#"><u>Source properties</u></a> .....	31
<a href="#"><u>Using Layers</u></a> .....	<b>41</b>
<a href="#"><u>About layers (OBS Studio)</u></a> .....	41

<a href="#">Understanding Layers</a> .....	41
<a href="#">Manage Layers</a> .....	42
<b><a href="#">Applying Filters for Special Effects</a></b> .....	<b>44</b>
<a href="#">About plug-in filters</a> .....	44
<a href="#">Using filters</a> .....	44
<a href="#">General Filters</a> .....	45
<a href="#">Effects Filters</a> .....	50
<a href="#">Audio/Video Filters</a> .....	55
<b><a href="#">Recording and Streaming</a></b> .....	<b>56</b>
<a href="#">About recording and streaming</a> .....	56
<a href="#">Recording</a> .....	56
<a href="#">Streaming</a> .....	57
<a href="#">Studio Mode</a> .....	58
<b><a href="#">Themes</a></b> .....	<b>61</b>
<a href="#">About themes</a> .....	61
<b><a href="#">Manage Profiles</a></b> .....	<b>62</b>
<a href="#">About profiles in OBS Studio</a> .....	62
<b><a href="#">Application Settings</a></b> .....	<b>63</b>
<a href="#">About settings</a> .....	63
<a href="#">General</a> .....	63
<a href="#">Stream</a> .....	64
<a href="#">Output</a> .....	65
<a href="#">Audio</a> .....	74
<a href="#">Video</a> .....	76
<a href="#">Define Hotkeys</a> .....	78
<a href="#">Advanced Settings</a> .....	80
<a href="#">Advanced Audio Properties</a> .....	81
<b><a href="#">Command Line Options</a></b> .....	<b>84</b>
<a href="#">About Command Line Options</a> .....	84
<a href="#">Command Line Keys</a> .....	84
<b><a href="#">Linux Shortcuts</a></b> .....	<b>86</b>

---

[Contents](#) | [Index](#)

◀ 4 ▶

<a href="#"><u>Mac Shortcuts</u></a> .....	87
<a href="#"><u>Windows Shortcuts</u></a> .....	88
<a href="#"><u>Legal Notices</u></a> .....	89
<a href="#"><u>Copyright</u></a> .....	89
<a href="#"><u>Index</u></a> .....	100

---

[Contents](#) | [Index](#)

◀ 4 ▶

# Introduction

## Welcome

Welcome to Open Broadcaster Software Studio MultiPlatform (OBS Studio), the most relevant streaming and recording tool for all platforms. With its integrated Canvas Preview, Source Plugins and Filters, OBS Studio delivers a comprehensive environment for professional streamers and involved people to create sophisticated video broadcasting and recordings for Web services.

## Installing OBS Studio

You can install OBS Studio onto your hard drive or run it from a removable media. By default, non-portable version of the program store profile-based files and application settings in:

%appdata%\obs-studio	FOR Windows
~/.config/obs-studio	FOR Linux
~/.obs-studio	FOR Linux + XDG
~/Library/Application Support/obs-studio	FOR OS X

Run installer and follow the on-screen installation instructions. The installer program automatically detects your system type and installs x86 or x64 binaries.

## Getting started

Variety of options available for you to learn OBS Studio including Help guide, Printed guide and online Forum. Getting up to speed depends on your experience with previous versions of OBS.

**If you are new to OBS Studio:**

See [An Overview of Open Broadcaster Software Studio](#) on page [7](#)

**If you are an experienced OBS user:**

See [What's New in OBS Studio](#) on page [9](#)

**If you want to focus on Web Streaming features:**

See [Streaming](#) on page [57](#)

See [Output](#) on page [65](#)

See [Streaming tab](#) on page [67](#)

**If you want to focus on Recording features:**

See [Recording](#) on page [56](#)

See [Output](#) on page [65](#)

See [Recording tab](#) on page [71](#)

## Using online Forum

Online forum provides community-based support with built-in bug report system (see [Post OBS Studio log-file](#) on page [12](#)).

All users must accept Forum online agreement before asking questions online.

# An Overview of Open Broadcaster Software Studio

## Work more efficiently

Workspace controls and quick scene management – OBS Studio gives you the tools you need to keep the work on track and efficient.

**Canvas Preview** Real-time canvas preview gives you ability to view all changes you made to position of input sources and their appearance.

**Studio Mode** Allow to preview all changes made to the scene before it would become on-air.

**Layers** With layers, you can work on one element without changing others. To rearrange elements, simply shift the order in the *Sources* list.

## Enjoy unlimited creative options

**Filters** Each source can be adjusted separately via *Filters*.

*Crop, Transform, Chroma Key* and many other visual effects available by default.

**Plug-in Sources** Choose the best plug-ins from the online community or even write your own. Open source code gives you a choice to modify and create your own future.

**Transitions** Transitions between scenes makes your shows more attractive.

# What's New in OBS Studio

## Stay free

Now your imagination is unlimited by innovation technologies developed for the application.

**Studio Mode** Control visually all changes completed to scenes without changing an output. Your spectators always see that, what you want to show to them, not how you do it.

**Multi-Track** Allows you to save audio sources as different tracks in one recording. Up to 4 tracks supported. You can filter, add effects, adjust level of your microphone's record later, without affecting your game's sound record, while all sounds stay in sync.

**Multi-Output** Now you can stream at one quality and save record in other simultaneously. Good option to stream in prime-time with overheated bandwidth – stream at medium and save at full quality to upload video later.

## Stay competitive

OBS Studio delivers enhanced tools to help you achieve your creative best.

**New render engine** Create professional OpenGL and Direct3D video recordings.

**New audio grabbing engine** Low latency, low memory

consumption, multi-track support – all in one built-in solution.

## Work fast and accurate

OBS Studio provides new controls over positioning and aligning sources.

**Snap to borders** Fast and accurate positioning of the sources with single mouse move.

**Transform** Customize output view for better appearance with easy mouse moves. No need to look for matched sources and adjust each manually. Also, all positions, size, cropping and aspect ratios can be adjusted pixel by pixel.

# Looking at the Work Area

## Getting familiar with the work area

The OBS Studio work area is arranged to help you focus on creating and editing high quality streams and recordings.

## About the work area

The work area consists of the following components:

**Menu bar** The menu bar contains menus for performing tasks. The menus are organized by topic. For example, the *Scene Collection* contains commands for working with scene collections.

**Canvas preview area** The canvas preview area provides real-time preview of the output. Output easily adjustable. (See [Working with sources \(positioning\)](#) on page [18](#); and see [Video](#) on page [76](#))

**Scene management and Output options** The scene management and output options controls hold tools for creating and editing output. (See [Creating Scenes in OBS Studio](#) on page [17](#); and see [Output](#) section on page [65](#))

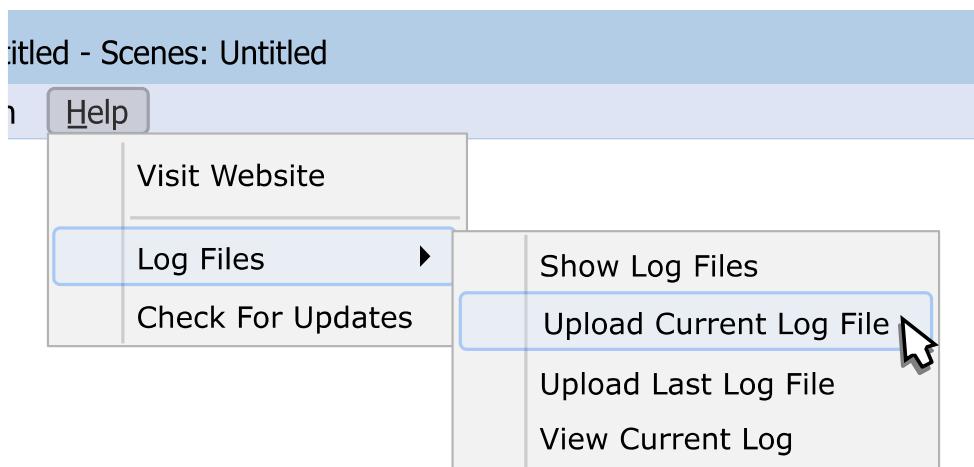
## Using menu bar

**Help menu** In the Help menu you can go to the online help forum, check for program's update, view current log and post log-file online.

## Post OBS Studio log-file online

To post online log-file of the current OBS Studio session:

- 1) go to the *Help* menu;
- 2) choose *Log Files* sub-menu;
- 3) click *Upload Current Log File*, application uploads log-file automatically;
- 4) copy the generated link (URL) and follow OBS Studio's Forum online instructions.

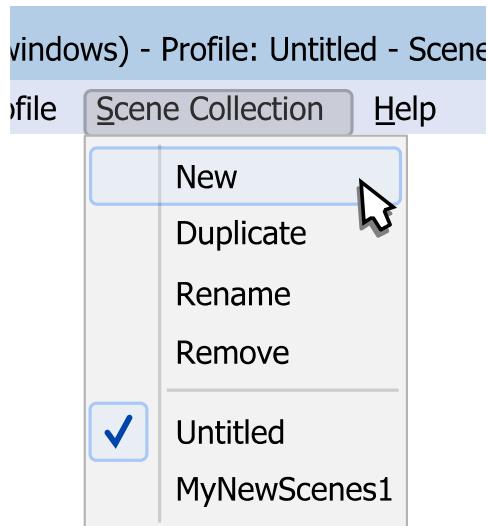


## Scene Collections menu

Scene Collections menu specifies sets of the scenes you work with. Current set (collection) is marked by  icon.

You can specify new scene collection by selecting sub-menu option *New*.

*Duplicate* sub-menu option makes a copy of the current scene collection.

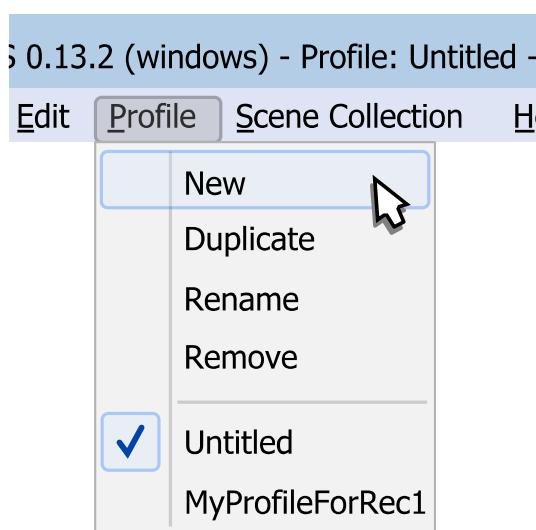


*Rename* sub-menu option allows to specify new name of the current scene collection.

*Remove* sub-menu option deletes current scene collection.  
Warning! Removed scene collections cannot be recovered.

## Profile menu

Profile menu specifies sets of the application settings (profile) you work with. Current profile is marked by icon.



You can specify new profile by selecting sub-menu option *New*.

*Duplicate* sub-menu option makes a copy of the current profile.

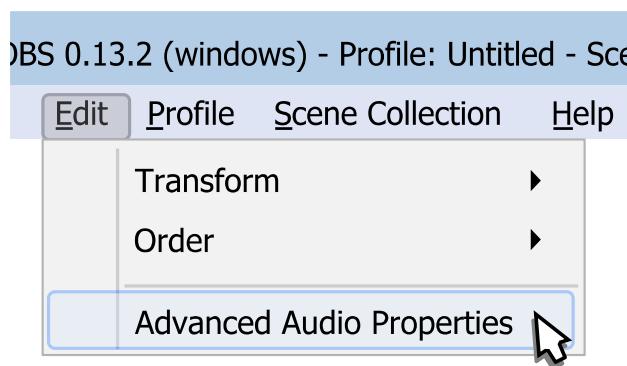
*Rename* sub-menu option allows to specify new name of the current profile.

*Remove* sub-menu option deletes current profile.

**Warning!** Removed profiles cannot be recovered.

## Edit menu

Edit menu has fast navigation links to most used properties of the sources and scenes.



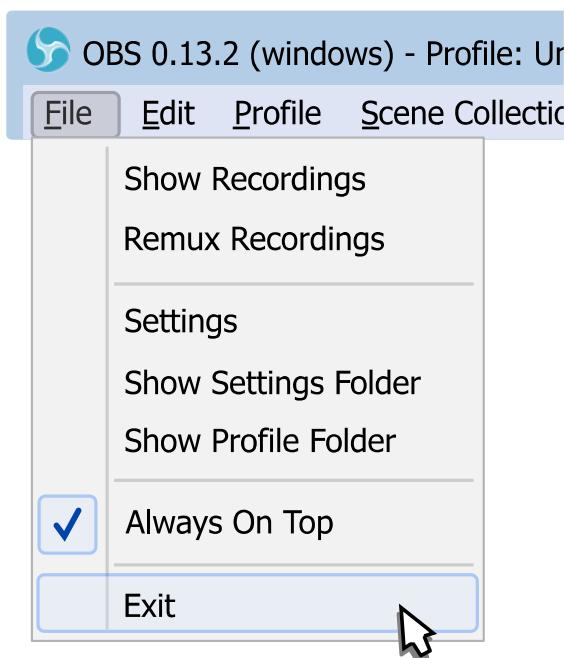
*Transform* sub-menu option applies transform to the sources.  
(See [Transform filter](#) on page 45)

*Order* sub-menu option allows to rearrange the layers. (See [Layer shift \(order\)](#) on page 43)

*Advanced Audio Properties* sub-menu option opens audio mixer dialog window. (See [Mixer](#) on page 81)

## File menu

File menu has general program settings and options.



*Show Recordings* sub-menu option opens in default file manager a directory specified for the recordings.

*Remux Recordings* sub-menu runs small build-in application for quick remux video files to different container without re-encoding. For example, FLV to MP4.

*Settings* sub-menu opens application *Settings* window. (See [Application Settings](#) on page [63](#))

*Show Settings Folder* sub-menu opens in default file manager a directory specified for the application settings.

*Show Profile Folder* sub-menu opens in default file manager a

directory specified for the profiles.

*Always On Top* sub-menu option, if checked, makes application always visible over the other windows.

*Exit* sub-menu closes OBS Studio.

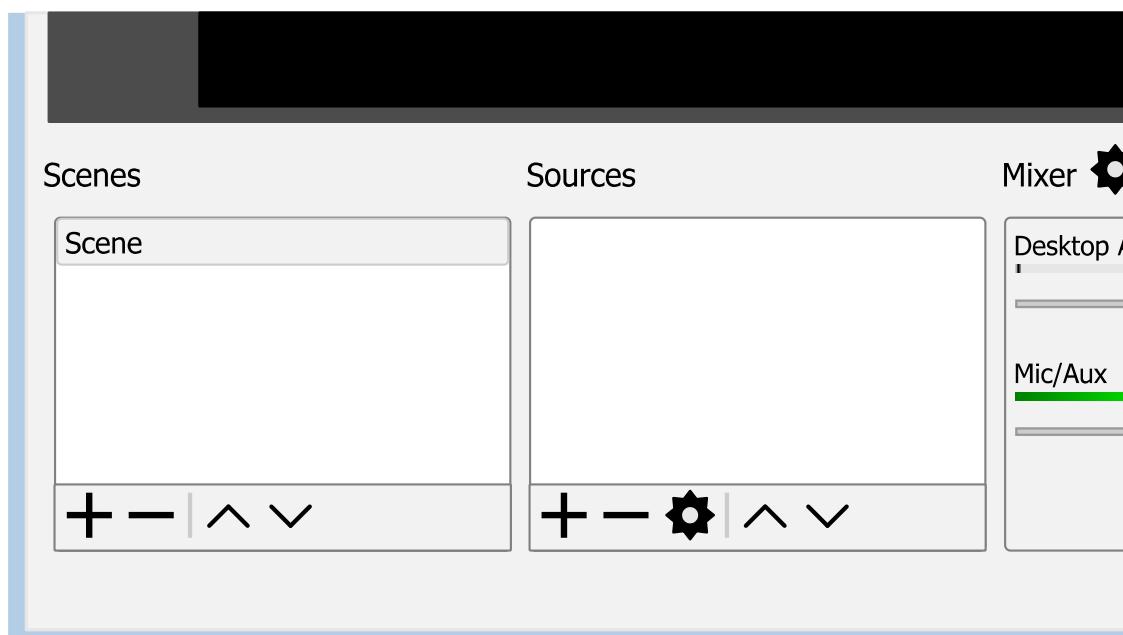
# Creating Scenes in OBS Studio

## About scenes and layers (OBS Studio)

OBS Studio uses scenes to combine output stream. Scene is combine of the video layers. Each layer has one input source. Different sets of layers joined into one scene. Only current scene goes to the output stream. So, you can prepare number of scenes and switch between them on the fly to change your output stream appearance.

## Getting started

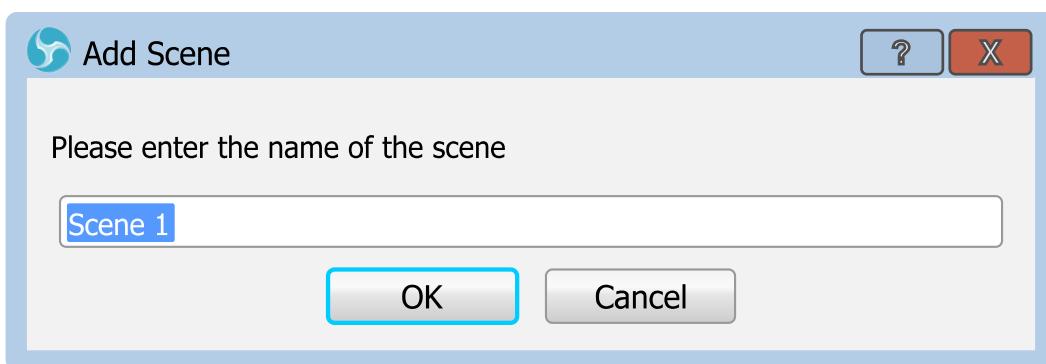
The first time you start the application, the blank scene named *Scene* appeared under the *Scenes* list. It contents visible as empty list of the *Sources*.



## Create a new scene

You can create a new scene in the *Scenes* list by clicking  icon on the options bar of the *Scenes* list. Or by right-clicking at the empty space of the *Scenes* list and choosing action *Add*.

When you create a new scene, dialog will appear where you can specify the name of the new scene.



Tip: give to the scenes informative names like "Intro", "Pause" and so on.

## Add source to scene

To add source to scene use getting sources method (See [Getting Sources into OBS Studio](#) on page [25](#))

## Adjusting Output

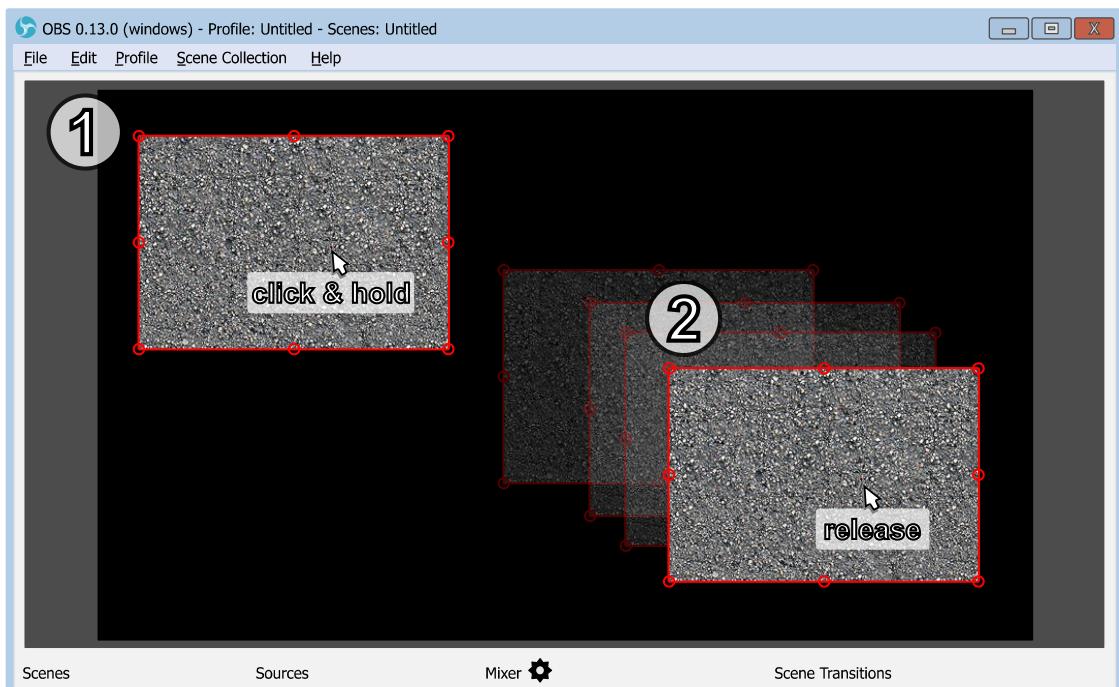
All video sources in scenes can be adjusted to match your output. As well as output can be adjusted to your requirements. (See [Video](#) on page [76](#))

## Working with sources (positioning)

Source inside the one scene can be moved to a different position by mouse drag-and-drop.

To perform source move:

- 1) click and hold left mouse button at the center of the red rectangle of the chosen source and drag it to the new position;
- 2) release the mouse button. (See [Illustration 1. Source move on page 19](#))



*Illustration 1. Source move*

Tip: you can temporary disable snapping (See [General Settings on page 63](#)) by holding down the *Ctrl* key while dragging sources.

## Source transform

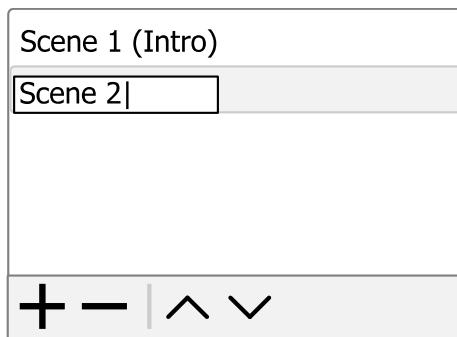
Each source can be adjusted via layer's *Transform* (See [Using Layers on page 41](#))

## Rename scene

To rename scene:

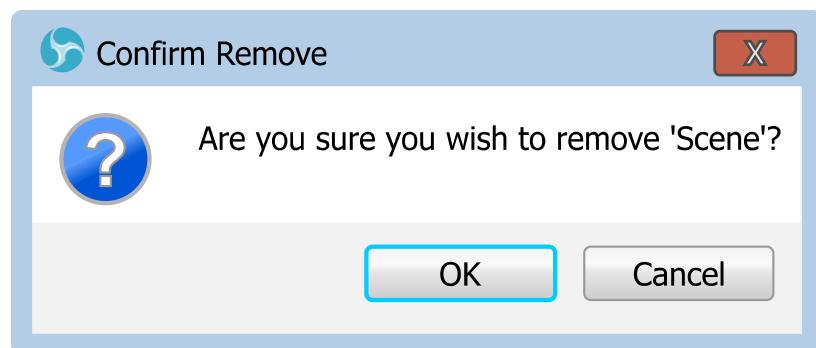
- 1) right-click on the selected scene in the *Scenes* list;

- 2) choose *Rename* option. Cursor will appear near the scene's name;
- 3) specify a new name and press *Enter*.



### Remove scene

To completely remove scene from a *Scenes* list: hit — icon in the *Scenes* list and agree to the confirmation dialog.

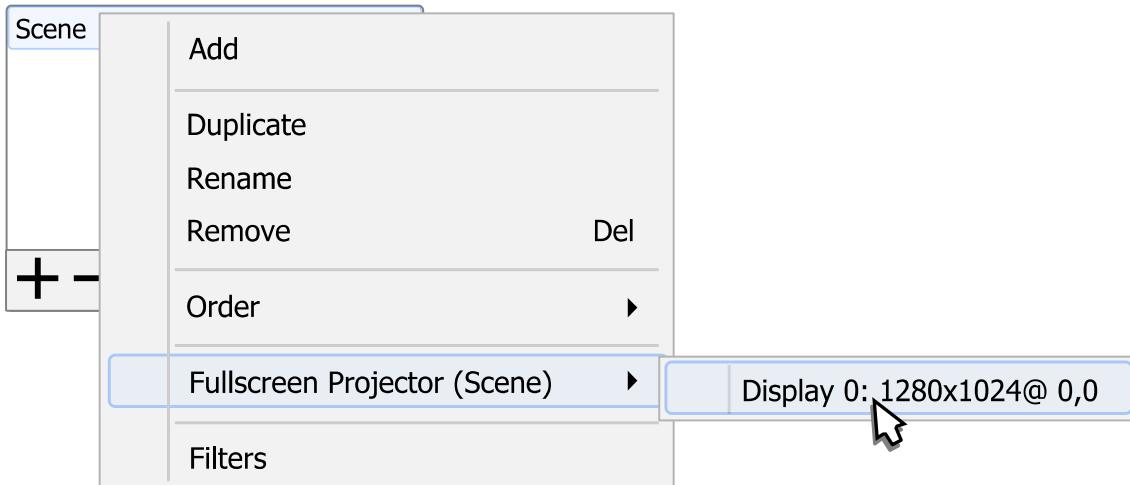


Removed scenes cannot be recovered.

### Full screen preview

To preview current scene in full screen:

- 1) right-click on the selected scene in *Scenes* list;
- 2) choose sub-menu *Fullscreen Projector (Scene)*;
- 3) select output device.



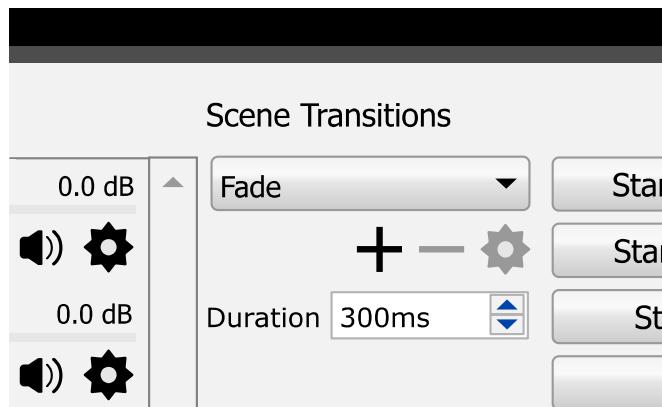
Tip: you can preview whole video output via right-clicking at preview window and choosing sub-menu *Fullscreen Projector (Preview)*.

To exit full screen preview mode: press *Esc* button.

## Scene transitioning

You can setup transitions when switching between scenes.

Transition type (effect) is specified by *Scene Transitions* drop down list (main window).



You can add 'configurable' transition by clicking icon under the *Scene Transitions* drop down list.

Dialog window will appear where you can specify a new name

for the configurable transition. Then you can configure some options of the transition.

To remove configurable transition: click  icon under the *Scene Transitions* drop down list and agree to the confirmation dialog.

To re-configure selected transition: click  icon under the *Scene Transitions* drop down list. Options dialog will appear, complete changes and close dialog window by clicking *OK* button.

Tip: some transitions effects non-configurable.

Transition's time is defined by *Duration* parameter, in milliseconds.

To perform transition from scene to scene: simply select new scene in *Scenes* list, transition will be applied automatically.

## Transitions types

By default, next transitions types available:

**Cut** [non-configurable] : switches from one scene to another immediately, the simplest type, low resources cost.

**Fade** [non-configurable] : switches from one scene to another in dissolve way, moderate resources cost.

### Options

- *Duration* : defines duration of the complete scene change, in milliseconds.

**Swipe** [configurable] : switches from one scene to another by horizontal or vertical frame movement, moderate resources cost.

#### Options

- *Duration* : defines duration of the complete scene change, in milliseconds.
- *Direction* : specifies direction of the frame movement (Left, Right, Up, Down).
- *Swipe In* : if checked, new scene will appear as side layer (instead of top/bottom one).

**Slide** [configurable] : switches from one scene to another by horizontal or vertical frame replacement, moderate resources cost.

#### Options

- *Duration* : defines duration of the complete scene change, in milliseconds.
- *Direction* : specifies direction of the frame movement (Left, Right, Up, Down).

**Fade to Color** [configurable] : switches from one scene to another by fade into intermediate color, moderate resources cost.

#### Options

- *Duration* : defines duration of the complete scene change, in milliseconds.
- *Color* : defines intermediate color of the frame during transition. Shows color in the hexadecimal format – #AARRGGBB.

- *Peak Color Point (percentage)* : defines rise and fall speeds of the color maximum (low values = fast rise).

# Getting Sources into OBS Studio

## About video and audio sources

Internet streams can combine different sets of video and audio sources. You can work with both type of sources in OBS Studio. OBS Studio can hold up to 4 audio tracks and 1 video in the same output stream (recording video), while number of inputs unlimited. Recording and streaming can be run independently and may stop at any time.

**Video sources** Video sources – fixed size digital video content provided by applications (usually game or camera).

**Audio sources** Audio sources – digital audio content provided by applications (usually game sound or mic).

## About video resolution and audio sample rate

In order to produce high-quality streams, it is important to understand how video resolution matches to canvas aspect ratio, and how to avoid of re-sampling audio tracks.

## Video resolution and aspect ratio

Video resolution is an image size visible to viewer. It's width and height in pixels named 'Video Resolution'.

Usually video plays at full resolution on the screen. Due to a different screen sizes and resolutions available on market, it is wise to make streams compatible with common displays. Also, sources can use different resolution inputs (each can be

adjusted by OBS Studio). (See [Transform filter](#) on page [45](#))

### Maintain aspect ratio of the video

To maintain aspect ratio (width\_in\_pixels / height\_in\_pixels) of the input video when it displayed full screen, use combination of *Crop Filter* and *Transform*. (See [Applying Filters for Special Effects](#) on page [44](#))

To make sure that the output video has the same aspect ratio with the preview window, always set preview's canvas size (resolution) with the same aspect ratio as output video. (See [Video](#) on page [76](#))

### Audio sample rate

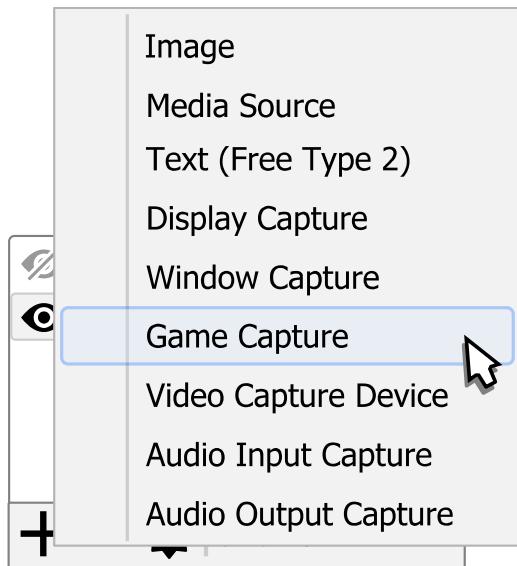
Digital copies of sound samples uses quantization algorithm for numeric representation. Thus, each sound stream consist of the flow of a fixed number of the digit sets (samples). That number must exceed at least twice the highest frequency of the sound stream. Human's ear can recognize frequencies up to 20000...22000 Hz Thus, most common audio sample rates are 44100 Hz and 48000 Hz.

If your main audio input has 44100 Hz sample rate, then use in OBS Studio: 44,1 kHz setting. (See [Audio](#) on page [74](#)) To reduce quantization noises avoid sample rate conversions.

### Add new video source to OBS Studio scene

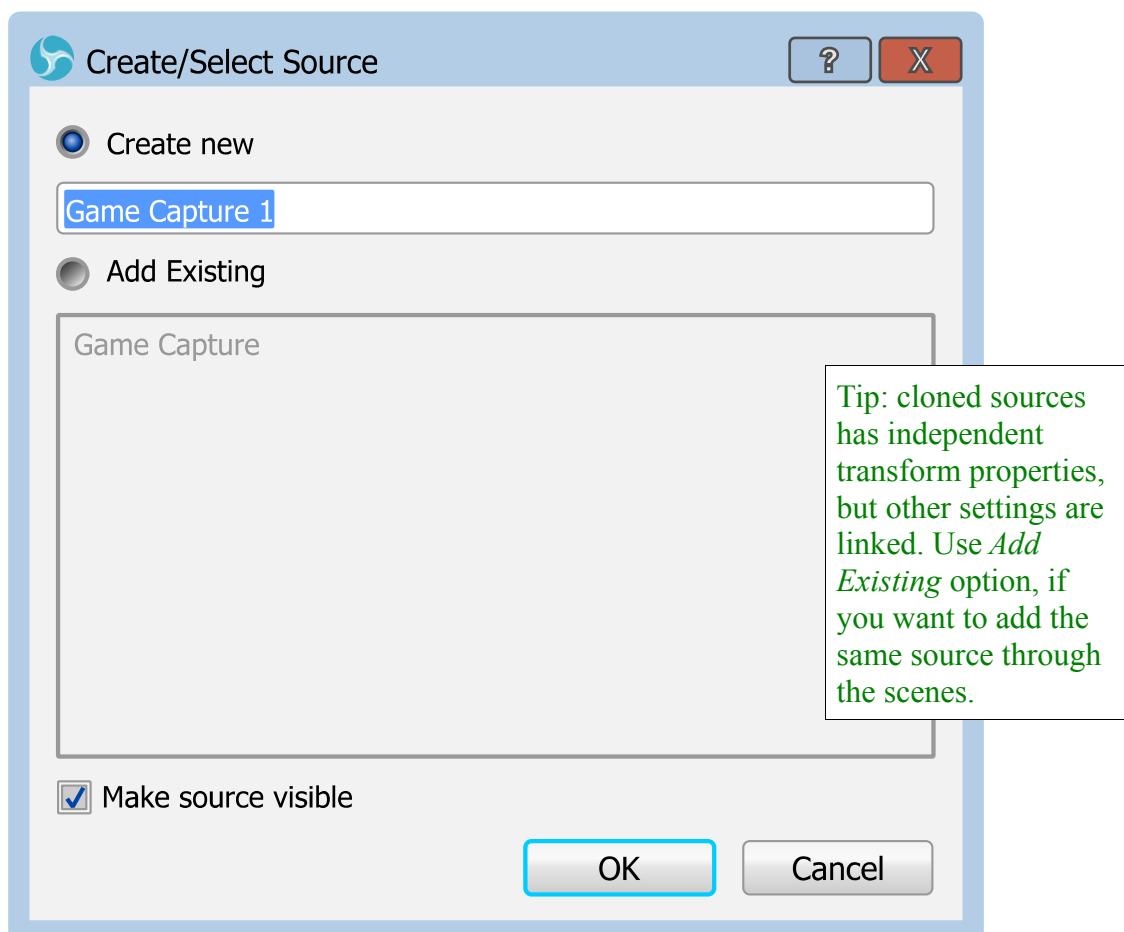
To add new video source to the current scene: click  icon on the options bar of the *Sources* list. Or right click at the empty space of the *Sources* list and choose action *Add*.

The pop-up list of the supported sources types will appear. Choose desirable one, for example: 'Game Capture'.



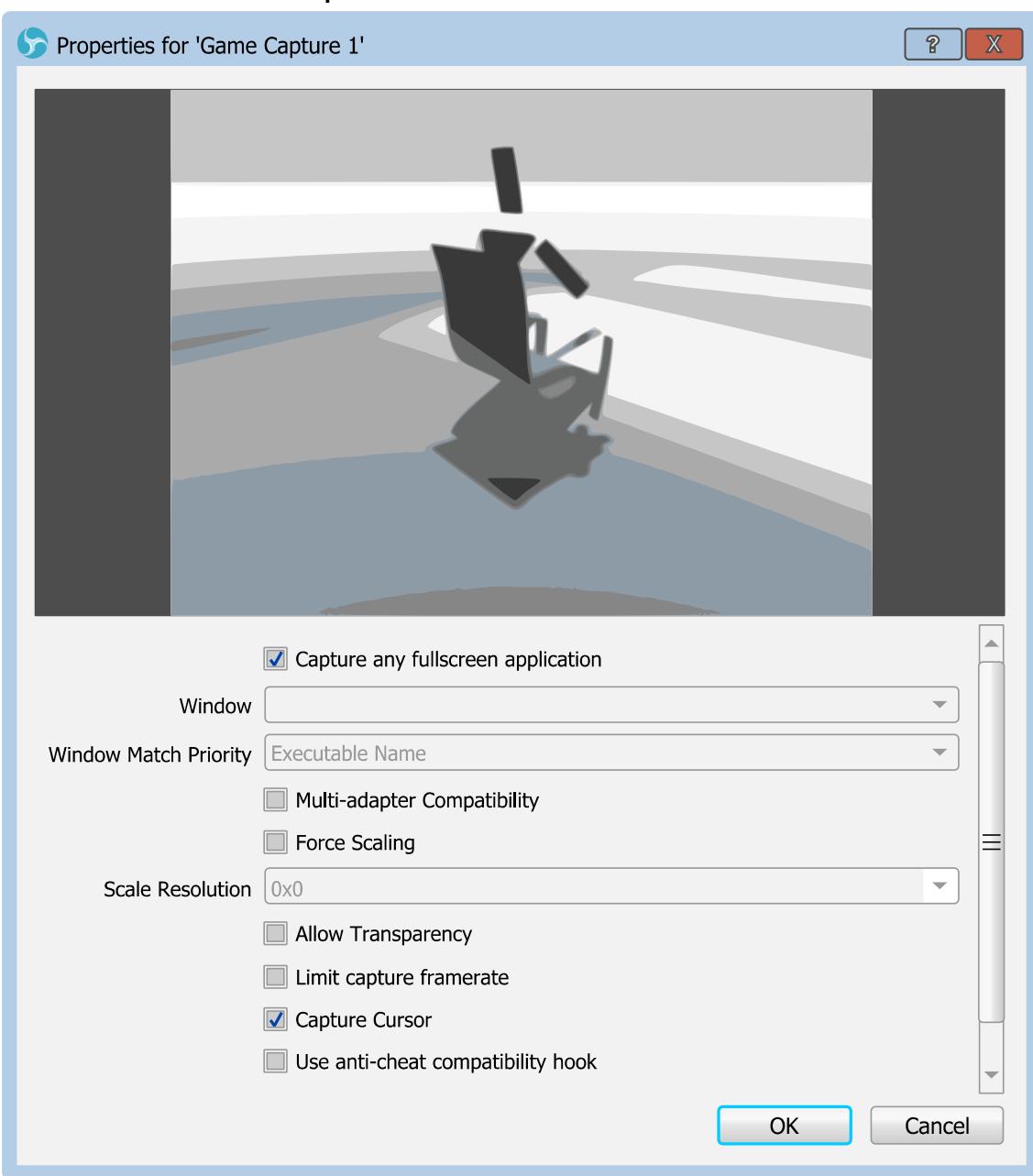
Tip: for camera input try first *Video Capture Device* option.

In the next dialog you can specify the name of the new source or add existing one (make a clone).



*Make source visible* check-box determines – will be this source enabled for output rendering or not. You can change this setting later. (See [Temporary disable source](#) on page 29)

Enter new name and click *OK* button. OBS Studio will add source to the canvas preview and opens properties dialog for the newly created source input.



If required, adjust the properties and close dialog window by clicking *OK* button.

### Temporary disable source

To temporary disable existing source or make it invisible: hit  icon in the *Sources* list, left to the source you wish to disable. The icon changes to  , source excluded from the rendered output.

### Temporary enable source

To temporary enable existing source or make it visible: hit  icon in the *Sources* list, left to the source you wish to enable. The icon changes to  , source included in the rendering output.

### Disable audio source

To disable audio source or mute it: click  icon in the *Mixer* list, right to the source you wish to disable. The icon changes to  , source disabled (muted).

### Enable audio source

To enable audio source: click  icon in the *Mixer* list, right to the source you wish to enable. The icon changes to  , source enabled.

### Configure source

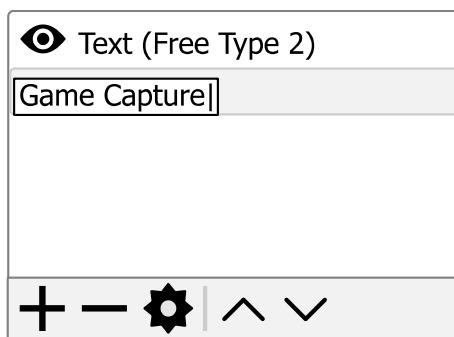
To re-configure selected source: click  icon under the *Sources* list (or right under the source – in case of the audio *Mixer* list). Dialog window of available options will appear. Choose needed, complete changes and close all opened dialog

windows by clicking *OK* button.

### Rename source

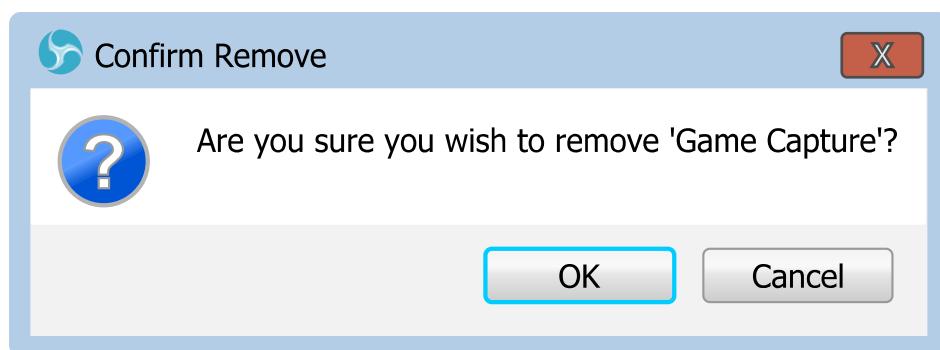
To rename source:

- 1) right-click on the selected source (layer) in the *Sources* list;
- 2) choose *Rename* option. Cursor will appear near the source's name;
- 3) specify a new name and press *Enter*.



### Remove source

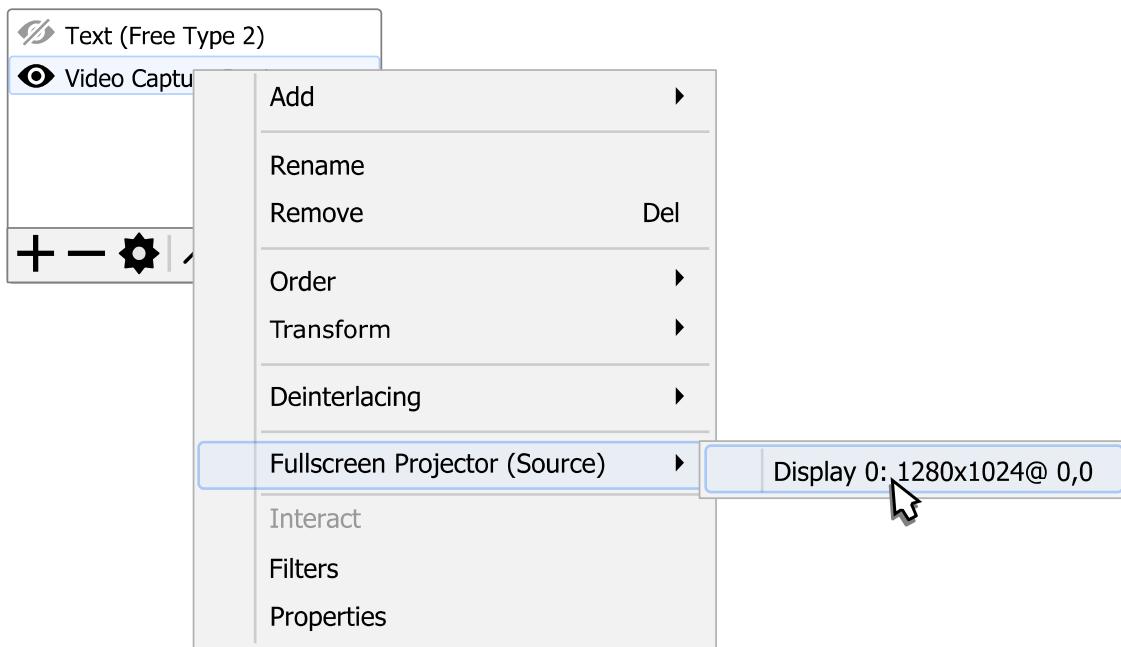
To completely remove a source from the current scene: hit icon in the *Sources* list. And agree with the confirmation dialog.



## Full screen preview (source)

To preview source in full screen:

- 1) right-click on the selected source (layer) in *Sources* list;
- 2) choose sub-menu *Fullscreen Projector (Source)*;
- 3) select output device.



To exit full screen preview mode: press *Esc* button.

## Source properties

By default, next sources types are available in OBS Studio:

### Image

#### Properties

*Image file* : path to the local image.

**Supported image types:** bmp, tga, png, jpeg, jpg, gif.

Tip: for animated GIF use *Media Source* input.

*Unload image when not showing* : if checked, free memory, when image not in use.

## Media Source

### Properties

*Local File* check-box : if checked, enables local path browse.

- *Local File* : path to the local resource.

**Supported media types:** mp4, ts, mov, flv, mkv, avi, mp3, ogg, aac, wav, gif, webm).

- *Loop* : if checked, resource will play infinity times.

*Restart playback when source becomes active* : if checked, source will start its playback from the start, each time you make it active (enabled/visible).

*Use hardware decoding when available* : if checked, OBS Studio tries to use hardware acceleration to play source.

*Hide source when playback ends* : if checked, OBS Studio makes source disabled (invisible) when playback ends.

*Advanced* : if checked, next options became available.

- *Force format conversion* : if checked, input would be converted to match program's Audio/Video settings.
- *Audio Buffer Size (frames)* : defines buffer's size for audio, in frames.
- *Video Buffer Size (frames)* : defines buffer's size for video, in frames.
- *Frame Dropping Level* : specifies type of the frames, that may be skipped due to connection issues to the source, to maintain overall smooth play.
- *YUV Color Range* : specifies type of the input video color range (Auto, Partial, Full).

Tip: overbright clipping and darkness in shadows of the imported video may take place when wrong color range specified. Set *YUV Color Range: Auto* to let's decoder detect color range type automatically.

## Text (Free Type 2)

### Properties

*Select font* : opens standard font select window (system installed fonts available only).

*Text field* : write there your text, which should be displayed as text source.

*Read from file* : if checked, OBS MP will use content from the text file instead of text field.

*Chat log mode (last 6 lines)* : if checked, last 6 lines of the input file will be used as text source.

*Text File (UTF-8 or UTF-16)* : path to the text file.

**Supported code pages:** UTF-8, UTF-16.

*Color 1* : defines top color of the gradient fill. Shows color of the font body in the hexadecimal format – #AARRGGBB.

*Color 2* : defines bottom color of the gradient fill. Shows color of the font body in the hexadecimal format – #AARRGGBB.

*Outline* : if checked, text becomes outlined.

*Drop Shadow* : if checked, text will cast shadow.

*Custom text width* : defines custom text width in pixels.

Zero value means no restrictions.

*Word Wrap* : if checked, words will be wrapped to maintain width defined by *Custom text width*.

## Display Capture

### Properties

*Display* : specifies display that will be captured.

*Multi-adapter compatibility* : if checked, program will use compatibility mode for systems with two or more video

cards installed.

Tip: enabling *Multi-adapter compatibility* option can slightly decrease capture performance due to additional VRAM to RAM downloading and uploading job. Use it with SLI and CrossFire, if capture task cannot be completed in usual way.

*Capture Cursor* : if checked, system cursor will be captured to the video.

## Screen Capture (XSHM)

(option available for Linux PC)

### Properties

*Screen* : specifies screen that will be captured.

*Capture Cursor* : if checked, system cursor will be captured to the video.

*Advanced Settings* : if checked, next options became available.

- *X Server* : specifies X Server (configuration).

## Window Capture

### Properties

*Window* : specifies window that will be captured.

*Window Match Priority* : specifies priority for window type recognition.

*Capture Cursor* : if checked, system cursor will be captured to the video.

*Multi-adapter compatibility* : if checked, program will use compatibility mode for systems with two or more video cards installed.

Tip: enabling *Multi-adapter compatibility* option can slightly decrease capture performance due to additional VRAM to RAM downloading and uploading job. Use it with SLI and CrossFire, if capture task cannot be completed in usual way.

*Show Window shadow* : if checked, window shadow captured (option available for Mac PC).

## Window Capture (Xcomposite)

(option available for Linux PC)

### Properties

*Window* : specifies window that will be captured.

*Crop Top (pixels)* : defines amount of pixels cropped at top of the window.

*Crop Left (pixels)* : defines amount of pixels cropped at left of the window.

*Crop Right (pixels)* : defines amount of pixels cropped at right of the window.

*Crop Bottom (pixels)* : defines amount of pixels cropped at bottom of the window.

*Swap red and blue* : if checked, swaps Red and Blue channel colors in captured window.

*Lock X server when capturing* : if checked, X server locked while capturing.

*Include X border* : if checked, X border included in video.

*Use alpha-less texture format (Mesa work around)* : if checked, special texture format is used to help capture certain windows with Mesa drivers.

## Game Capture

### Properties

*Capture any fullscreen application* : if checked, OBS Studio will try to hook (capture) to any full screen application.

Tip: if you got hook errors in log - temporary disable your security software.

*Window* : specifies window that will be captured. Option available only if *Capture any fullscreen application* is unchecked.

Tip: use *Window* option with executable name specified, if you switching screens (alt-tabbing) too often.

*Window Match Priority* : specifies priority for window type recognition. Option available only if *Capture any fullscreen application* is unchecked.

*Multi-adapter compatibility* : if checked, program will use compatibility mode for systems with two or more video cards installed.

Tip: enabling *Multi-adapter compatibility* option can slightly decrease capture performance due to additional VRAM to RAM downloading and uploading job. Use it with SLI and CrossFire, if capture task cannot be completed in usual way.

*Force Scaling* : if checked, video will be scaled before went to render.

*Scale resolution* : specifies new resolution of the input before it went to render.

*Allow transparency* : if checked, alpha channel can be applied.

*Limit capture framerate* : if checked, capture processing will be completed in fixed intervals, regardless the input can provide higher fps values.

Tip: enable *Limit capture framerate* if you experience CPU overload with very high fps video rendering (for example, game source itself isn't locked at 30fps or rendered without vertical sync, and thus can run at 300fps instead).

*Capture Cursor* : if checked, system cursor will be captured to the video.

*Use anti-cheat compatibility hook* : if checked, OBS Studio will try to hook to the application for capture in an unusual

way.

Tip: try to enable *Use anti-cheat compatibility hook* if you experienced hook errors with certain games.

*Capture third-party overlays (such as steam)* : if checked, additional overlays (Steam like) will be captured to the video output.

## Game Capture (Syphon)

(option available for Mac PC)

### Properties

*Source* : specifies source.

*Allow Transparency* : if checked, alpha channel can be applied.

*Launch SyphonInject* : when clicked – Syphon capture started.

- *Inject* : if checked, inject allowed.
- *Application* : specifies application to capture.

*Crop* : if checked, cropping to capture applied.

- *Crop left* : defines amount of pixels cropped at left of the capture.
- *Crop top* : defines amount of pixels cropped at top of the capture.
- *Crop right* : defines amount of pixels cropped at right of the capture.
- *Crop bottom* : defines amount of pixels cropped at bottom of the capture.

*Syphon License* : when clicked – displays Syphon license.

## Video Capture Device

### Properties

*Device* : specifies video device installed in system.

**Supported devices**: direct show input enabled device for Windows; kernel enabled for Linux; AV Foundation enabled for Mac.

*Deactivate* : deactivates selected device.

*Configure Video* : configure device options if any available.

*Configure Crossbar* : configure device options if any available.

*Deactivate when not showing* : if checked, device will be turned off when not displaying. This also disables sound from the device.

*Resolution/FPS Type* : specifies to use device default resolution or set custom.

*Resolution* : defines the value of the resolution for the device. Option available only if *Resolution/FPS Type* parameter is set to custom.

*FPS* : defines the value of the fps for the device. Option available only if *Resolution/FPS Type* parameter is set to custom.

*Video Format* : specifies type of video format for the device. Option available only if *Resolution/FPS Type* parameter is set to custom.

**Tip:** in some rare cases, camera input may display in purple color, like PAL signal on NTSC screen. If that happen, specify *Video Format* manually.

*YUV Color Space* : specifies color space of the input video.

*YUV Color Range* : specifies type of the input video color range (how to decode it).

*Buffering* : specifies buffer type for the input device.

*Flip vertically* : if checked, flips video input top down.

*Audio Output Mode* : specifies to capture only or make sound heard from other devices (like desktop speakers).

Tip: if *Audio Output Mode* set other than 'Capture audio only', then audio may be captured from the general desktop device. (See [Audio](#) on page 74)

*Use custom audio device* : if checked, you can specify other audio device for input capture.

*Audio Device* : specifies other audio capture device. Option available only if *Use custom audio device* is checked.

*Input* : specifies hardware input (option available for Linux PC).

*Video Standard* : specifies video standard of the input (option available for Linux PC).

*DVTiming* : specifies DV timing (option available for Linux PC).

*Use buffering* : if checked, device buffering enabled (option available for Linux PC).

## Audio Input Capture

### Properties

*Device* : specifies additional audio input device for capture.

*Use Device Timestamps* : if checked, OBS Studio will use time-stamps from the specified device. [Unchecked by default]

## Audio Output Capture

### Properties

*Device* : specifies additional audio device to capture output.

*Use Device Timestamps* : if checked, OBS Studio will use time-stamps from the specified device. [Checked by default]

## JACK Input Client

(source available for Linux PC)

### Properties

*Start JACK Server* : if checked, starts jack server.

*Number of Channels* : defines number of audio channels available for input.

## Audio Capture Device (ALSA)

(source available for Linux PC)

### Properties

*Device* : specifies additional audio input device for capture.

*Rate* : defines audio sample rate for device.

# Using Layers

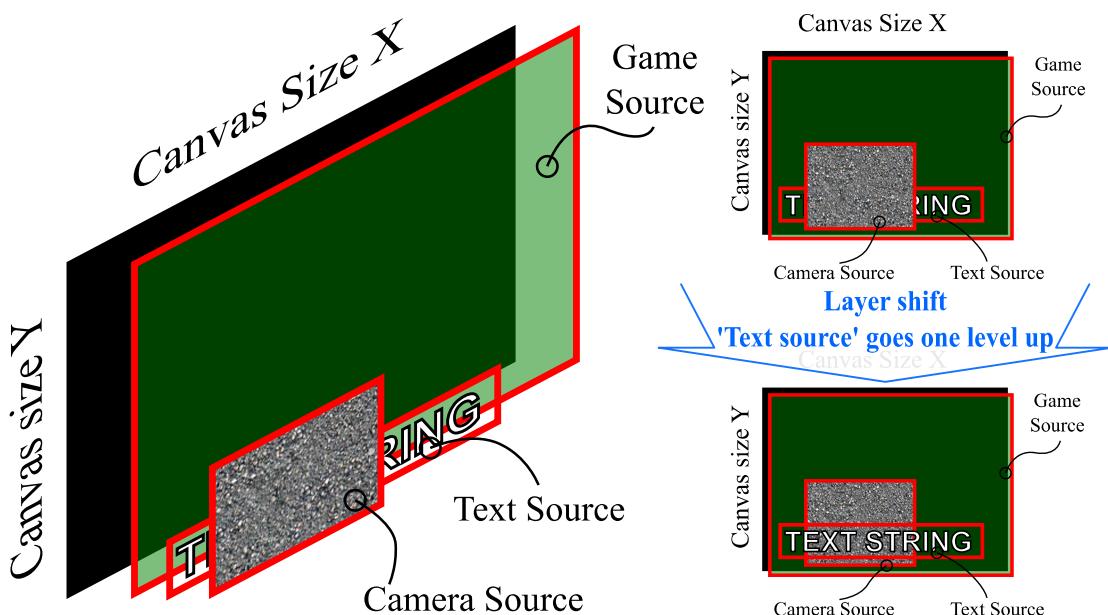
## About layers (OBS Studio)

OBS Studio uses layers mechanism to render output stream.

## Understanding Layers

Each source added to OBS Studio lies on a different layer.

OBS Studio uses layers combination to render output picture that will be streamed.



Layers can have different properties: size, transparency, color shift etc. Top layer is the highest in the sources list. All layers in the list can be shifted by mouse drag-and-drop.

The top layer can cover content of the bottom one, arrange the layers with caution and check its appearance in Canvas Preview.

## Manage Layers

### Add new layer

New layer can be added to OBS Studio scene via add new source option. (See [Add new video source to OBS Studio scene](#) on page [26](#))

### Rename layer

To rename layer use *Rename* source option. (See [Rename source](#) on page [30](#))

### Remove layer

Existing layer can be deleted via remove existing source option. (See [Remove source](#) on page [30](#))

### Temporary disable layer

Layer can be disabled via temporary disable source option. (See [Temporary disable source](#) on page [29](#))

### Temporary enable layer

Layer can be enabled via temporary enable source option. (See [Temporary enable source](#) on page [29](#))

### Transform layer

Layer can be changed via *Filters*.  
(See [Transform filter](#) on page [45](#))

### Preview layer Fullscreen

To preview layer in full screen mode, use *Fullscreen Projector* option. (See [Full screen preview \(source\)](#) on page [31](#))

## Layer shift (order)

To rearrange layers, perform mouse drag-and-drop move over the layer in the *Sources* list:

- 1) select the layer you want to shift;
- 2) click and hold mouse button;
- 3) move selection to the new order;
- 4) release mouse button.



Or: select a layer from the *Sources* list, click icon  $\wedge$  in the sources list to shift the layer one level up; click icon  $\vee$  to shift selected layer one level down.

Also, you can right-click over the source, select *Order* submenu and go to the arrange options.

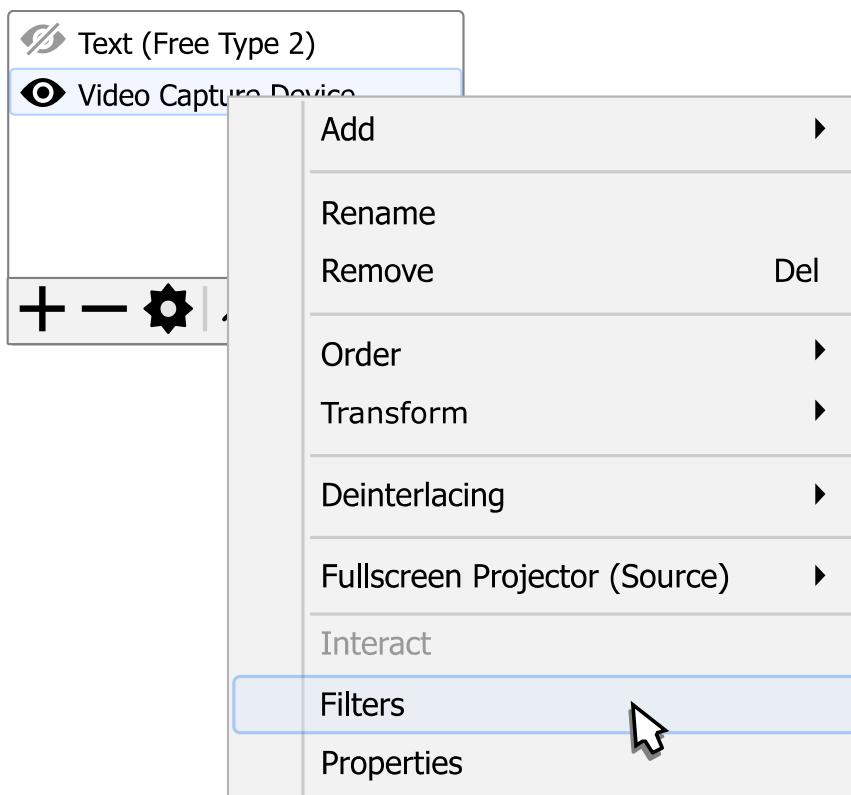
# Applying Filters for Special Effects

## About plug-in filters

You can install plug-in filters developed by online community. Once installed, the plug-in filters appear at the *Filters* list and work in the same way as built-in filters.

## Using filters

To apply a filter, right click on the source (layer) and choose the appropriate option from the pop-up list. Some filters available only for video sources, some – only for audio.

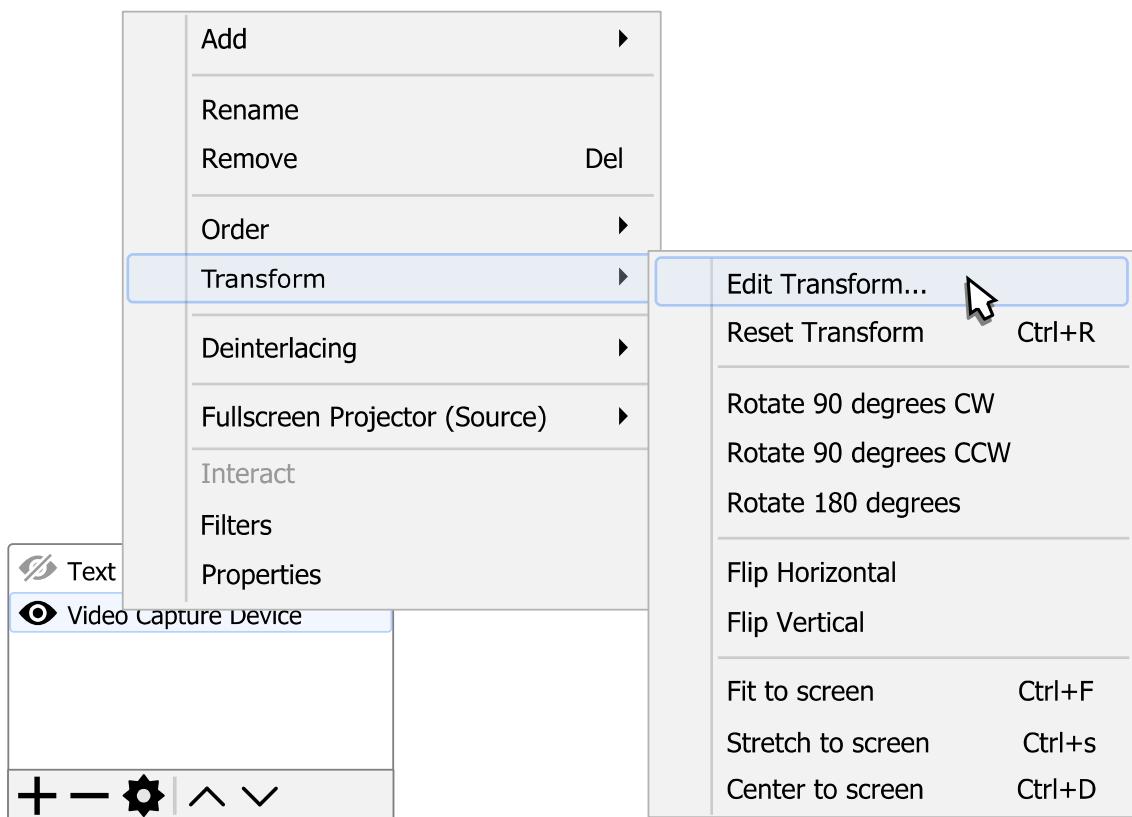


## General Filters

**Transform filter** Transform filter adjusts appearance of the video source: it's size, mirroring, rotation and cropping.

To make source (layer) transform:

- 1) right-click on the source in the *Sources* list;
- 2) choose *Transform* sub-menu;
- 3) click on *Edit Transform...*



- 4) Transform settings dialog will appear. Make changes to the desirable fields and click close window button to save changes.

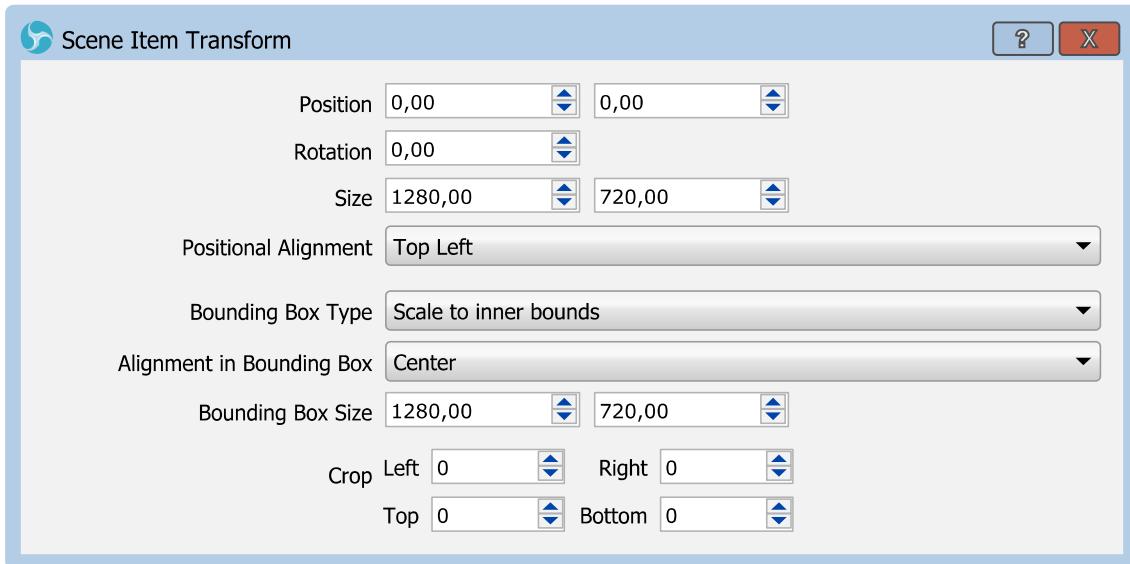


Illustration 2. Transform dialog window

Tip: to get best result from transform filter use [Transform options \(dependencies\)](#) table on page [46](#).

All coordinates measured in pixels and begins from the top left corner of the screen. The highest value is bottom right corner.

Table 1. *Transform options (dependencies)*

Bounding Box Type	Size parameter	Bounding Box Size	Aspect ratio (defined by)	Alignment in Bounding Box
No bounds	Scale image	–	Fixed (original input)	–
Stretch to bounds	Doesn't affect	Scale image	Variable (Bounding Box Size)	Doesn't affect
Scale to inner bounds	Scale image	Scale image	Fixed (Size parameter)	adjustable
Scale to outer bounds	Scale image	Scale image (image exceed bounds on	Fixed (Size parameter)	adjustable

Bounding Box Type	Size parameter	Bounding Box Size	Aspect ratio (defined by)	Alignment in Bounding Box
		height or width)		
Scale to width of bounds	Scale image	scale image (width always in bounds)	Fixed ( <a href="#">Size parameter</a> )	adjustable
Scale to height of bounds	Scale image	scale image (height always in bounds)	Fixed ( <a href="#">Size parameter</a> )	adjustable
Maximum size only	Scale image	scale image (but max image size fixed by <a href="#">Size parameter</a> )	Fixed ( <a href="#">Size parameter</a> )	adjustable

Tip: fast transform *Fit to screen* (*Ctrl+F*) option sets *Bounding Box Size* to *Scale to inner bounds*, resets *Size parameter* to original input, and sets *Bounding Box Size* to canvas size.

Tip: fast transform *Stretch to screen* (*Ctrl+S*) option sets *Bounding Box Size* to *Stretch to bounds*, resets *Size parameter* to original input, and sets *Bounding Box Size* to canvas size.

Tip: fast transform *Center to screen* (*Ctrl+D*) option sets *Position* parameters to center in accordance with *Position Alignment*.

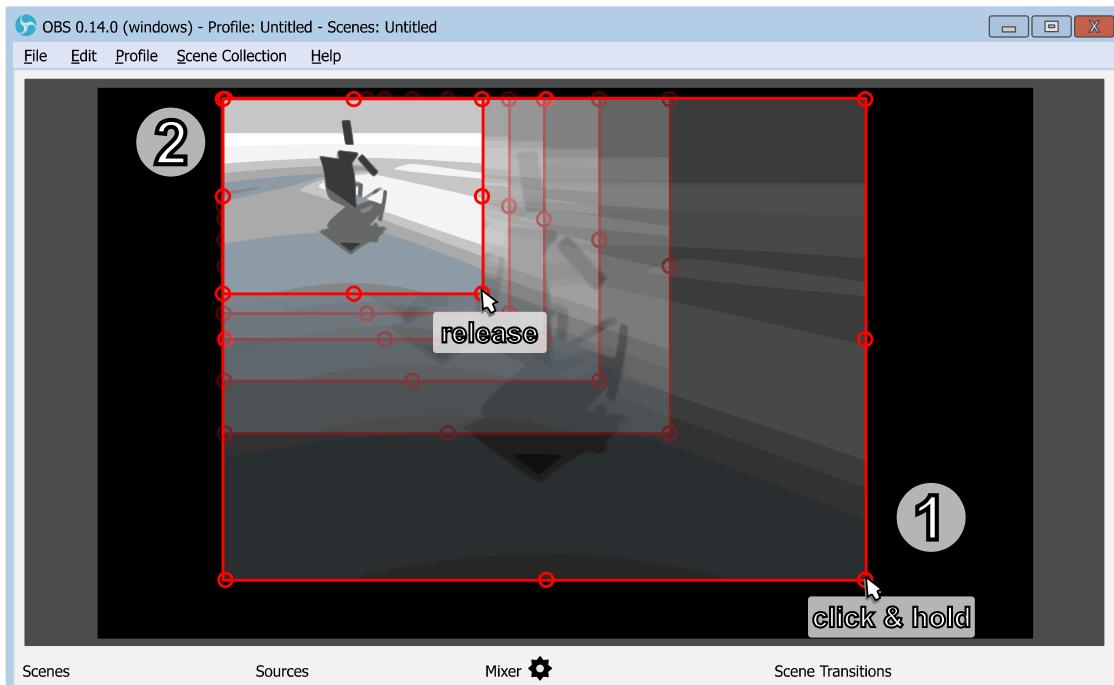
Tip: fast transform *Reset transform* (*Ctrl + R*) option sets *Position* to (0; 0), *Rotation* to 0, *Size* to source's input size, *Positional Alignment* to Top Left, *Bounding Box Type* to No bounds.

To perform **manual transform** of any source in the preview window:

- 1) click and hold mouse button over any red circle of the source bounding box, in canvas preview window;

Tip: you can choose any available source, and drag its any bounding box circle in any direction.

- 2) move mouse to a new position to achieve desirable scale of the source (layer);
- 3) release mouse button. (See [Illustration 3. Transform with mouse move](#) on page [48](#))



*Illustration 3. Transform with mouse move*

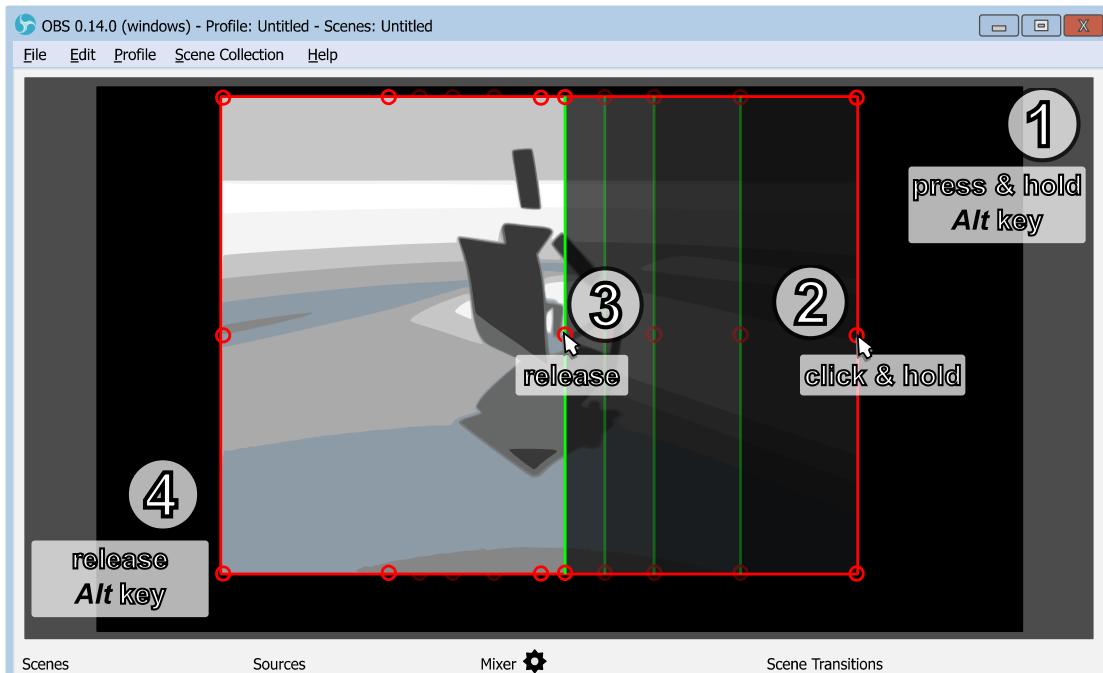
Tip: you can temporary disable snapping (See [General Settings](#) on page [63](#)) by holding down the *Ctrl* key while resizing.

To perform **easy cropping** move, over any source in the preview window:

- 1) set *Bounding Box Type* of the source to 'No bounds'; (See [Transform filter](#) on page [45](#))
- 2) press and hold *Alt* key;
- 3) click and hold mouse button over any red circle of the source bounding box, in canvas preview window;
- 4) move mouse to a new position to achieve desirable cropping of the source (the cropped side of bounding box

- turns green color);  
 5) release mouse button;  
 6) release *Alt* key. (See [Illustration 4. Easy cropping with mouse move](#) on page 49)

Tip: cropping values stored in relative coordinates under the *Crop* section of the *Scene Item Transform* window. (See [Illustration 2. Transform dialog window](#) on page 46)



*Illustration 4. Easy cropping with mouse move*

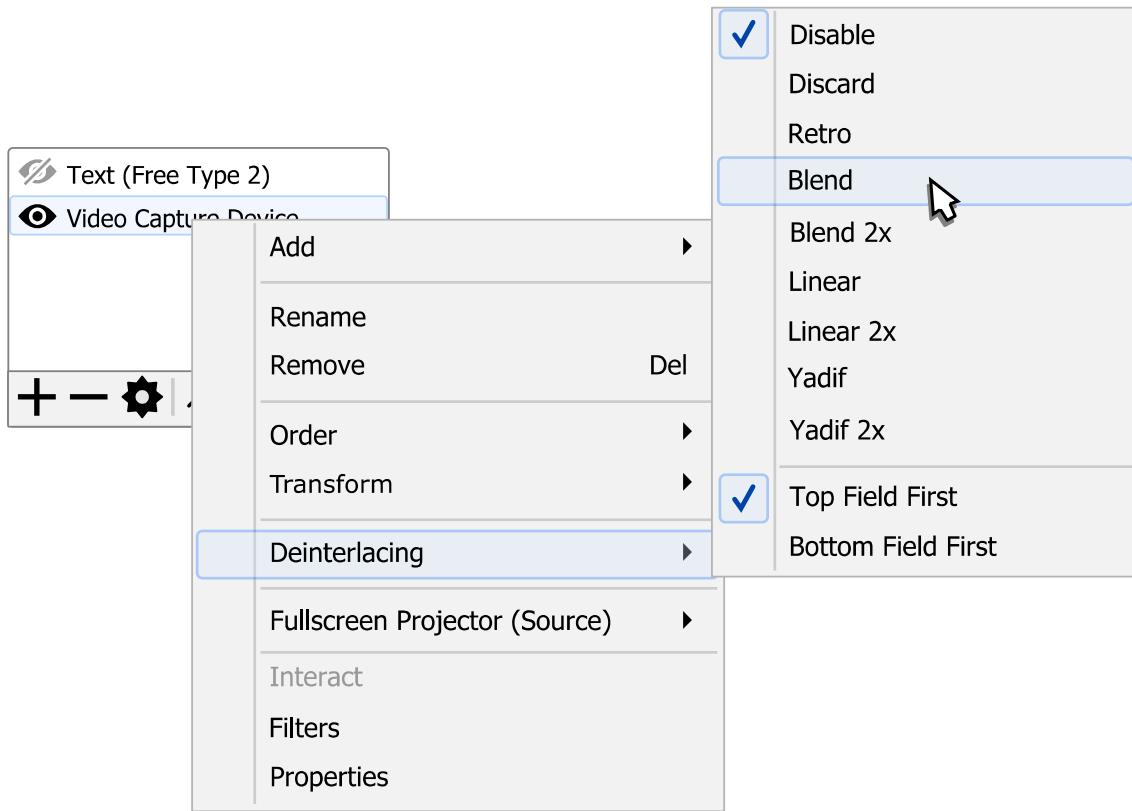
## Deinterlacing filter

Deinterlacing filter converts interlaced source into progressive video.

Tip: filter available only for supported types of the input sources. If your input has visible horizontal stripes on fast moving objects, probably you have interlaced source – apply deinterlacing filter.

To apply deinterlacing filter (remove interlacing of the video):

- 1) right-click on the interlaced source in *Sources* list;
- 2) select *Deinterlacing* sub-menu;
- 3) choose desirable deinterlacing filter and specify first field (Top or Bottom). Chosen filter marked by icon.



To remove deinterlacing filter, apply deinterlacing filter *Disable*.

## Effects Filters

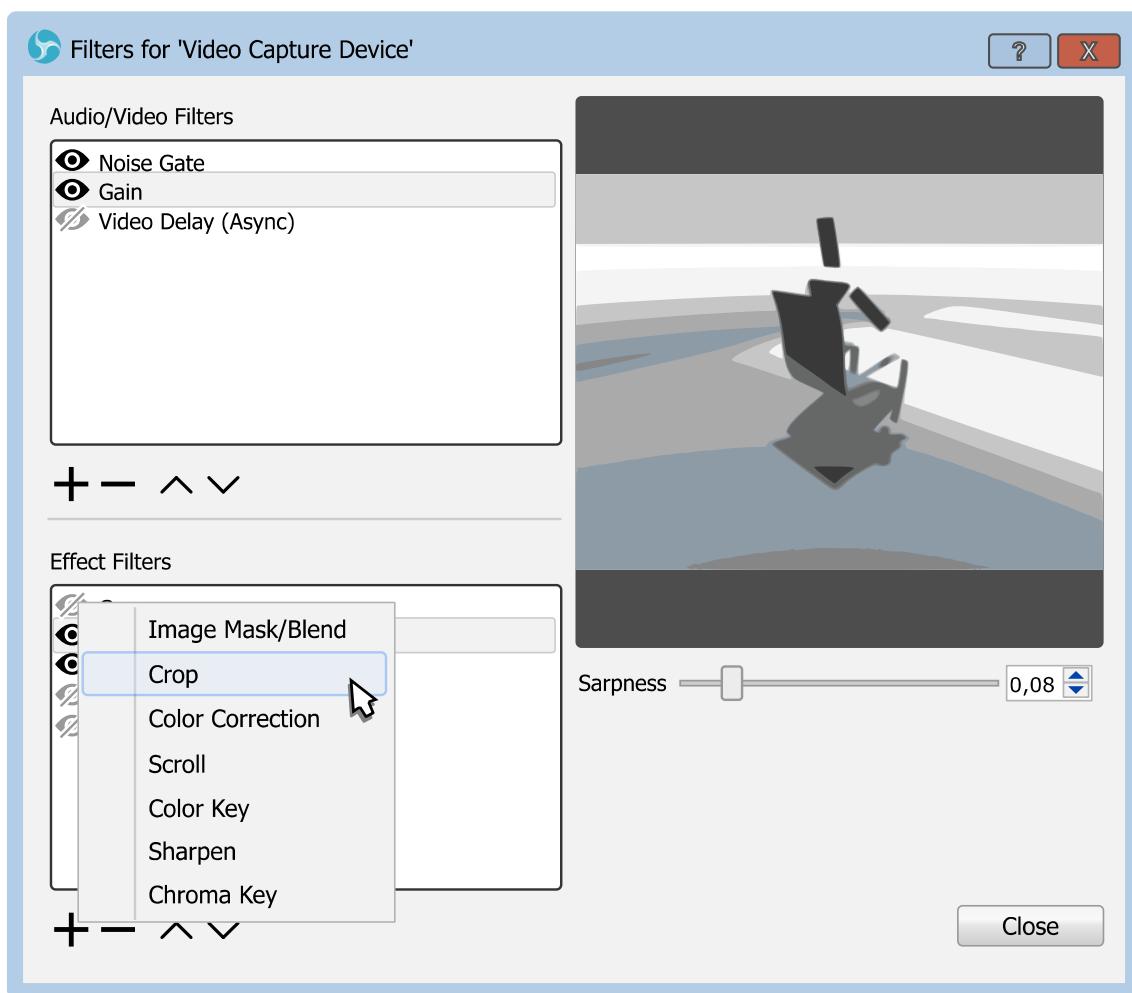
**Crop filter** Crop filter cuts the unneeded parts of the video source from top, bottom, left, right sides.

Tip: use *Crop* filter if you have letter-boxed source.

Tip: always apply *Crop* filter first (move it at the top of the list) – that leaves less data, thus you can free some CPU/GPU power.

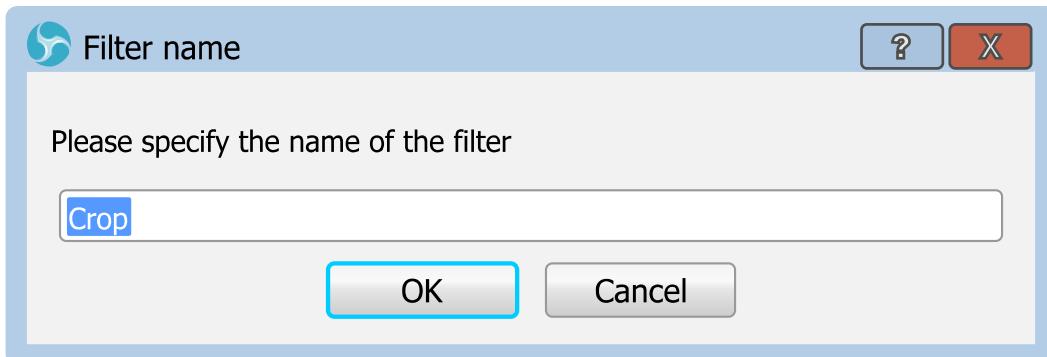
Tip: this filter acts independently of any cropping performed via 'easy cropping' function. (See [easy cropping](#) on page 48)

To apply *Crop filter* under the *Effects Filters* dialog: click icon on the options bar of the *Effects Filters* list. (See [Illustration 5. Filters dialog window](#) on page 51) Or right click at the empty space of the *Effects Filters* list and choose action *Add*.



*Illustration 5. Filters dialog window*

New dialog will appear where you can specify the name of the new filter.



Crop filter properties accessible right to the *Effects Filters* list.

## Properties

*Relative* : if checked, all coordinates of the image calculated as relative.

*X* : defines new image size in pixels starting from top left corner by X coordinate (horizontal axis).

*Y* : defines new image size in pixels starting from top left corner by Y coordinate (vertical axis).

*Width* : defines new image width in pixels.

*Height* : defines new image height in pixels.

## **Image Mask/Blend** Image Mask/Blend filter sets opacity or blends the source to the specified image.

Tip: Image Mask/Blend useful to produce round-looking camera's inputs.

## Properties

*Type* : defines type of mask and blend.

Tip: if alpha mask is preset in the image file itself, then choose type *Alpha Mask (Alpha Channel)* to use it.

*Path* : specifies path to local image file.

**Supported image types:** bmp, tga, png, jpeg, jpg, gif.

*Color* : defines color tint of the image. Shows color of the background in the hexadecimal format – #AARRGGBB.

*Opacity* : defines image opacity in %.

*Stretch Image (discard image aspect ratio)* : if checked, mask will be stretched to match source's size.

## **Color Correction** Color Correction filter makes some adjustments to image color and appearance.

Tip: use *Color Correction* to achieve specials effects.

## Properties

*Color* : defines color tint of the image. Shows color of the background in the hexadecimal format – #AARRGGBB.

*Opacity* : defines image opacity in %.

*Contrast* : defines image contrast.

*Brightness* : defines image brightness.

*Gamma* : defines image gamma.

## Scroll

Scroll filter enables source self move along the bounding box.

Tip: use *Scroll* filter together with the text source to make scrolling string.

## Properties

*Horizontal Speed* : defines speed of the horizontal movement of the source inside the bounding box.

*Vertical Speed* : defines speed of the vertical movement of the source inside the bounding box.

*Limit Width* : if checked, limits scrolling width of the source.

- *Width* : defines max width of the scroll (where image repeats itself), in pixels.

*Limit Height* : if checked, limits scrolling height of the source.

- *Height* : defines max height of the scroll (where image repeats itself), in pixels.

## Color Key

Color Key filter removes video's background. Same as *Chroma Key* filter.

Tip: if *Color Key* produce robust result, then try to use *Chroma Key* filter.

## Properties

*Key Color Type* : specifies key color of the background that will be extracted.

*Key Color* : defines color of the background. Shows color of the background in the hexadecimal format – #AARRGGBB.

*Similarity (1–1000)* : defines color similarity.

*Smoothness (1–1000)* : defines color smoothness of the extraction.

*Opacity* : defines image opacity in %.

*Contrast* : defines image contrast.

*Brightness* : defines image brightness.

*Gamma* : defines image gamma.

## Sharpen Sharpen slightly sharpens video.

### Properties

*Sharpness* : defines strength of sharpness enhancement.

## Chroma Key Chroma Key filter cuts video's background using information based on a specified color ('green screen').

Tip: use well lightened solid color backgrounds to achieve best results with Chroma Key filter.

### Properties

*Key Color Type* : specifies key color of the background that will be extracted.

*Key Color* : defines color of the background. Shows color of the background in the hexadecimal format – #AARRGGBB.

*Similarity (1–1000)* : defines color similarity.

*Smoothness (1–1000)* : defines color smoothness of the extraction.

*Key Color Spill Reduction (1–1000)* : defines color spill reduction.

*Opacity* : defines image opacity in %.

*Contrast* : defines image contrast.

*Brightness* : defines image brightness.

*Gamma* : defines image gamma.

## Audio/Video Filters

**Gain** Gain filter makes audio source louder.

Properties

*Gain (dB)* : defines gain of the audio, in decibels.

**Video Delay (Async)** Video Delay (Async) filter delays video source, while capturing audio ignores this filter. Makes video and audio asynchronous.

Properties

*Delay (milliseconds)* : defines video delay of the source, in milliseconds.

**Noise Gate** Noise Gate filter cutoff all sounds lower/upper than defined volume in audio input. Filters signal pikes.

Tip: Noise Gate filter useful to setup microphone's noise floor.

Properties

*Close Threshold (dB)* : defines close threshold, in decibels.

*Open Threshold (dB)* : defines open threshold , in decibels.

*Attack Time (milliseconds)* : defines length of the sound's front signal, in milliseconds.

*Hold Time (milliseconds)* : defines hold time of the sound's signal, in milliseconds.

*Release Time (milliseconds)* : defines length of the sound's back signal , in milliseconds.

# Recording and Streaming

## About recording and streaming

Two types of output takes place in OBS Studio:

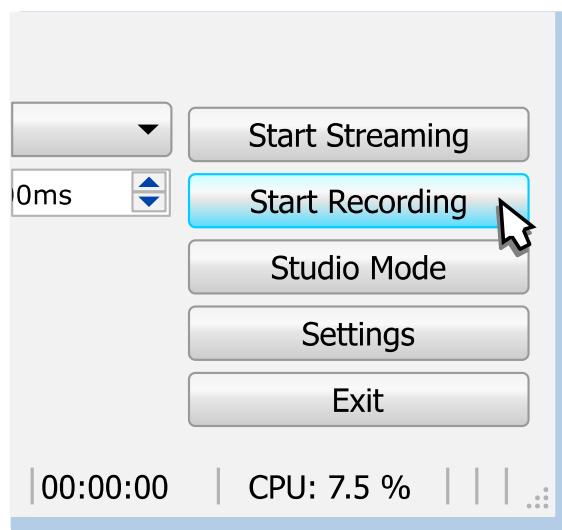
*Local recording* – when capturing material are stored on local PC;

*Network streaming* – when capturing material streamed over a Web.

Both types of output in OBS Studio can be running simultaneously and independently.

## Recording

User may start and stop record at any time. Click the button *Start Recording* to begin recording current scene.



The button's name changes to *Stop Recording*.

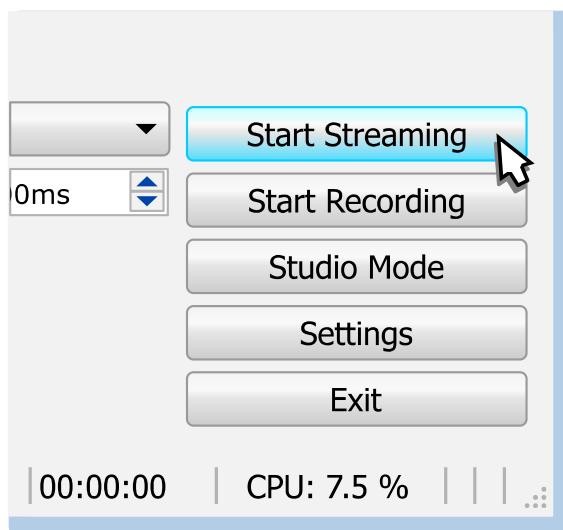
Click the button *Stop Recording* to stop recording current scene.

Also you may define hotkeys (shortcuts) to start and stop recording. (See [Define Hotkeys](#) on page [78](#))

For fine tuning recordings see [Recording tab](#) on page [71](#).

## Streaming

User may start and stop stream at any time. Click the button *Start Streaming* to begin streaming current scene.



The button's name changes to *Stop Streaming*.

Click the button *Stop Streaming* to stop streaming current scene.

Tip: if you enable *Stream Delay* (buffer) (see [Advanced Settings](#) on page [80](#)), then you'll have two possible options to stop the stream: by click *Stop Streaming* and choose 'Stop Streaming' - transmit data until empty buffer; or by click *Stop Streaming* and choose 'Stop Streaming (discard delay)' – immediately stops data transmit.

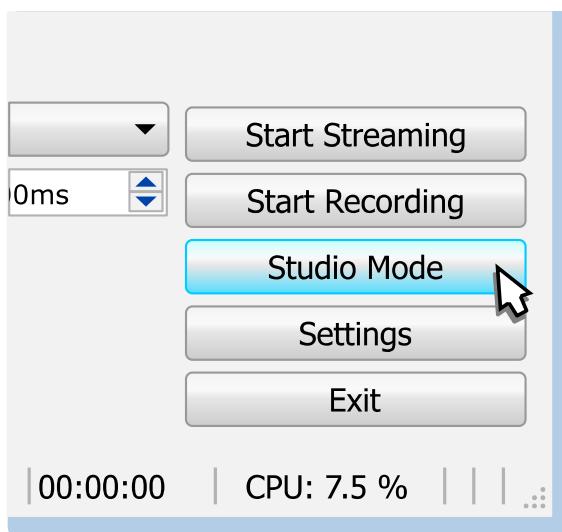
Also you may define hotkeys (shortcuts) to start and stop streaming. (See [Define Hotkeys](#) on page [78](#))

For fine tuning streaming see [Streaming tab](#) on page [67](#).

## Studio Mode

While streaming or recording you can change scenes without affecting output.

To enter the Studio Mode: click the *Studio Mode* button (main window).



The button's color changes to 'selected' state (blue).

The preview canvas splits into two screens:

The left one – scene to edit.

The right one – actual output, not editable.

(See the picture [Studio Mode view](#) on page [60](#))

To make any changes to scenes in Studio Mode: select scene from the *Scenes* list and edit it in the left screen.

To go to the Studio Mode Options: click icon at the center of the main window. Next options are available:

*Duplicate scene* : if checked, scene virtually doubled, thus you can edit current output scene, while keeping the 'old scene version' at the output. Only transform, position and visibility of the layers are editable.

Tip: always keep *Duplicate scene* checked if you planning to edit all scenes 'live', including current scene.

*Duplicate sources* : if checked, sources inside scene virtually doubled, thus you can edit also *Sources* properties. Option accessible only if *Duplicate scene* is checked.

Tip: not all sources able to copy themselves virtually – changes completed to such sources properties would be shown immediately. First, try to edit not current scene: select current scene (it goes to output), enter Studio Mode, select desirable scene, complete changes, and then make transition (or [exit Studio Mode](#) and switch to already changed scene later).

*Swap Preview/Output Scenes After Transitioning* : if checked, after transition completed in Studio Mode, OBS Studio will select scene that was on output before that transition.

Tip: check *Swap Preview/Output Scenes After Transitioning* if you planning to change and switch between two editable scenes too often. It is rare setting, you may leave it unchecked.

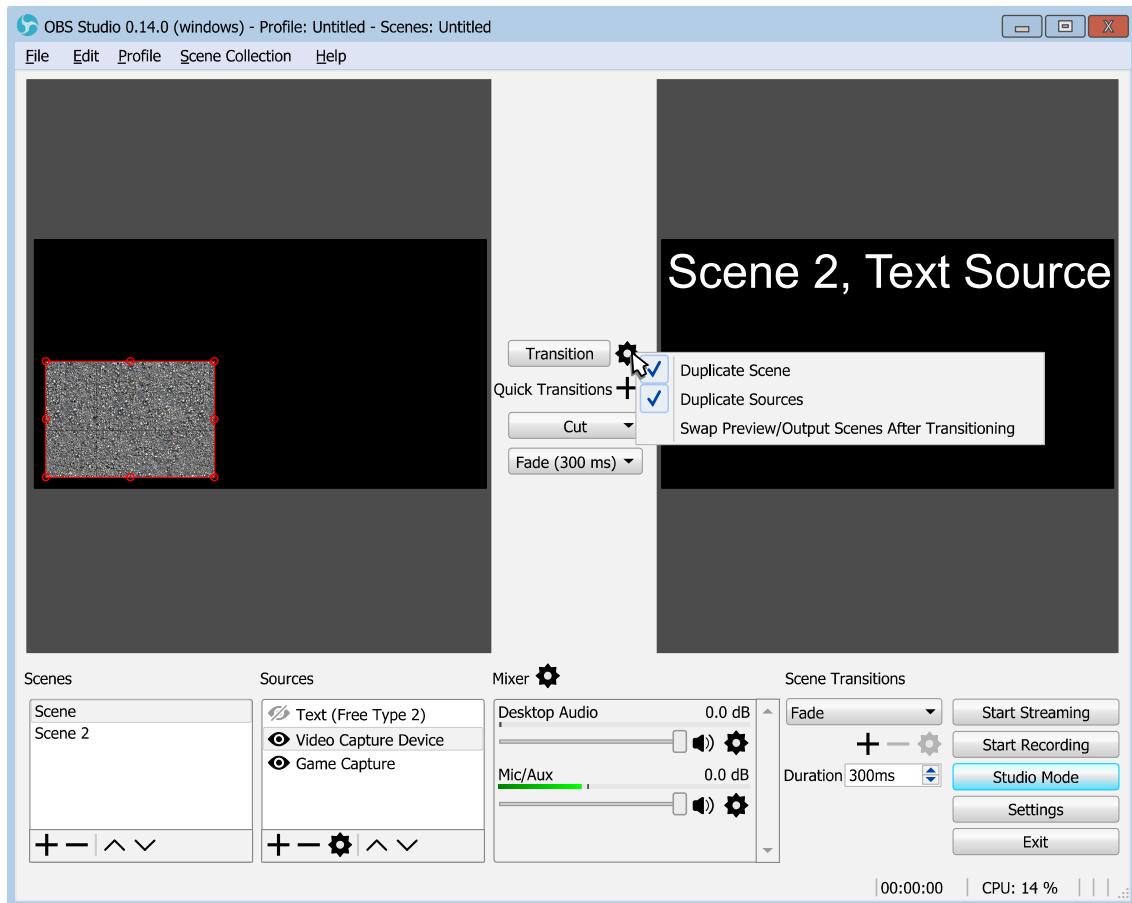


Illustration 6. Studio Mode view

The changes made to the scene became visible (goes to the output) when you click *Transition* button (at the center of the main window – between left and right previews).

Transition type in Studio Mode can be adjusted via *Quick Transitions* button: click icon at the center of the main window and choose transition type.

To exit Studio Mode: click the button *Studio Mode* again.

Tip: exit from Studio Mode doesn't change an output. OBS Studio will display current output scene (that was on right half of the screen) as preview canvas window.

# Themes

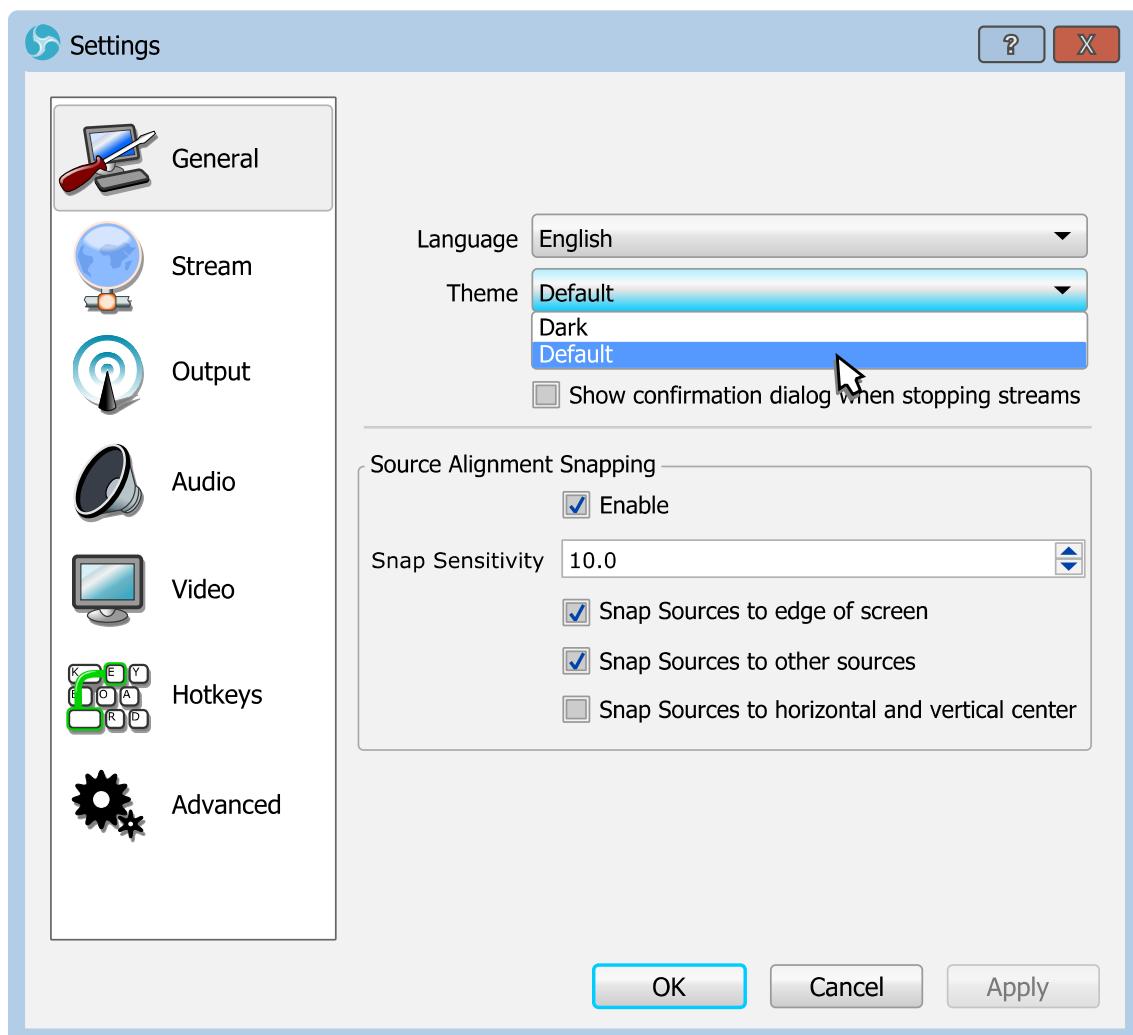
## About themes

OBS Studio can use different program skins (themes).

The 'Dark' theme suitable for evening time streaming, while 'Default' theme is versatile.

## Changing current theme

To change current theme click *Settings* button. Navigate to *General* options in Settings window, choose a new theme from the drop-down list and click *OK* button to save changes.



# Manage Profiles

## About profiles in OBS Studio

All program preferences can be stored as profiles. You can use different settings for frequently used tasks by simply changing profiles.

To change, make new, rename, duplicate or remove profile: See [Profile menu](#) on page [13](#).

# Application Settings

## About settings

By default, application is ready to record and to stream out-of-the-box. But for a fine tune and for individual requirements you can adjust every option on your wish. All the settings available through the *Settings* button, main window.

## General

There is options to specify default interface language, theme, confirmations and snapping options.

### General Settings

Defines common settings of the application user interface.

*Language* : specifies interface language.

*Theme* : specifies appearance of the program (skin). (See

[Themes](#) on page 61)

*Show confirmation dialog when starting streams* : if checked, confirmation dialog will appear before stream begins.

*Show confirmation dialog when stopping streams* : if checked, confirmation dialog will appear before stream ends.

Tip: check *Show confirmation dialog when stopping streams* and *Show confirmation dialog when starting streams* to avoid stop/run a stream by accident.

### Source Alignment Snapping

- *Enable* : if checked, source's bounding box will 'magnetize' to selected elements of preview window. Next options adjustable when *Source Alignment Snapping: Enable* checked:

- *Snap Sensitivity* : defines strength (width) of the snapping zone, in pixels.
- *Snap Sources to edge of the screen* : if checked, all sources can snap to edges of the preview window.
- *Snap Sources to other sources* : if checked, source can snap to bounding box of another source.
- *Snap Sources to horizontal and vertical center* : if checked, source can snap to center of the preview window.

## Stream

There are options to specify streaming Web service, streaming server and individual stream key.

### Stream settings

You can use automatically updated presets and list of web services or customize your own server.

*Stream Type* : specifies type of the stream (*Streaming Services* or *Custom Streaming Server*).

#### Streaming Services

*Service* : specifies a Web service to stream to.

*Show all services* : if checked, *Service* list extends to full list of available services instead of most popular one.

*Server* : specifies streaming server.

*Stream key* : specifies individual user's stream key. By security reasons key shown wildcards.

Tip: usually, stream key ("stream name" for some services) provided by Web service, in way defined by Web service itself.

*Show* : when pressed, *Stream key* showed normally (no wildcards).

## Custom Streaming Server

*URL* : specifies streaming server (customize).

*Stream key* : specifies individual user's stream key. By security reasons key shown wildcards.

*Show* : when pressed, *Stream key* showed normally (no wildcards).

*Use authentication* : if checked, next options available:

- *Username* : specifies login on server, if required.
- *Password* : specifies password to login on server, if required.
- *Show* : when pressed, *Password* showed normally (no wildcards).

## Output

There is options to define encoder settings, bitrate, output path and number of audio tracks available in output video.

### Output mode

Under the Output Mode *Simple* only one audio track is forced to output stream/record.

Set Output Mode to *Advanced* to get advantage of the multi-track feature.

To set Output Mode to *Advanced*, navigate to *Output* options in *Settings* window, choose *Output Mode: Advanced* from the drop-down list and hit *Apply* button to save changes.

## Streaming

- *Video Bitrate* : defines encoding bitrate for the output video. Value in kbps.
- *Audio Bitrate* : defines encoding bitrate for the output sound.
- Enforce streaming service bitrate limits : if checked, default streaming service bitrate setting should be applied instead of value specified on this tab.
- *Enable Advanced Encoder Settings* : when checked, a new options for Encoder are available
  - *Encoder Presets (higher = less CPU)* : presets that increases scanning deep of the encoder algorithm for motion detection. Highest value is *ultrafast* (no scan). Lowest value is *slower* (deep scan).  
Tip: set it to *veryfast* or *superfast* - most modern CPUs unable to encode high resolution video in real-time under lower presets without frames drop. Lower presets generates video with lower bitrate at the same quality.
  - *Custom Encoder Settings* : defines custom encoder settings that overrides any preset settings, parameters separated with space. For example, *qp=24 bframes=0*  
Tip: list of the parameters depends on encoder, default encoder is x264, look for parameters list on the developer's internet page.

## Recording

- *Recording path* : defines directory (folder) where new recordings will be stored.
- *Generate File Name without Space* : if checked, a new file name for recording will not contain space symbols.
- *Recording Quality* : preset that defines does the recording would be saved under the same as steam encoding settings or not.

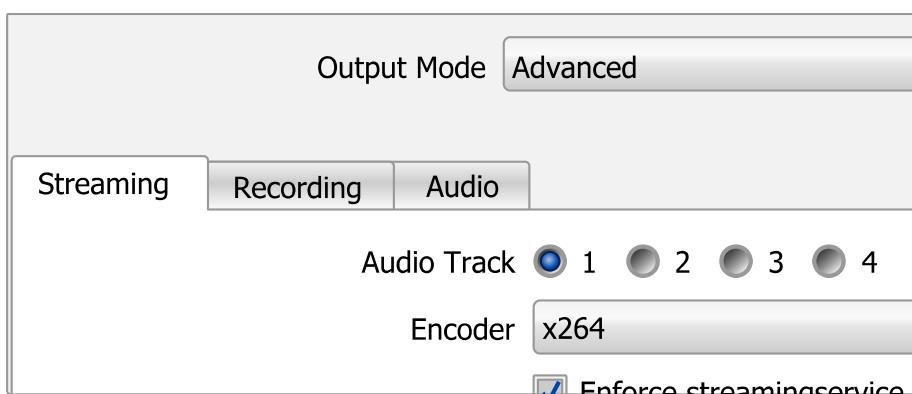
- *Recording Format* : defines container format for recordings.  
Tip: use mp4 container if you plan to edit your recordings later.
- *Custom Muxer Settings* : defines custom muxer settings, that overrides any preset settings; parameters separated with space. For example, *movflags=frag\_keyframe min\_frag\_duration=4000000*  
Tip: look for full parameters list of the ffmpeg muxer on the developer's internet page.

## Streaming tab

Streaming tab available only in Output Mode: *Advanced* (See [Output mode](#) on page 65)

On the streaming tab you can select # of track which will be streamed (now only one track in a stream is supported by Web hosts).

- *Audio Track* : # of the audio track that will be streamed.



Tip: only one track is selectable for streaming. Multi-track is available in recordings. (See [Recording tab](#) on page 71)

Tip: check selected track in [Advanced Audio Properties](#) on page 81.

- *Encoder* : encoder type. Default value is x264.

Tip: availability of codecs depends on PC configuration.

- *Enforce streaming service encoder settings* : when checked, default streaming service encoder settings should be applied instead of values specified on this tab.
- *Rescale Output* : when checked, video will be rendered and encoded with different resolution (don't forget to specify new image size).  
Tip: use *Rescale Output* on Streaming tab page to stream at low resolution while recording still running at full.
- *Rate Control* : specifies encoding bitrate control for the output video.  
Tip: *Rate Control* values are CBR – constant bitrate; ABR – average bitrate; VBR – variable bitrate; CRF – constant rate factor.  
Tip: use CBR for compatibility purposes, streaming.  
Tip: use CRF for high-quality local recording.  
Tip: use VBR to enable CRF-like encoding with upper limit of *Bitrate* (bitrate = maxrate).  
Tip: use ABR to enable CBR-like encoding but without bitrate padding. Video bitrate can fluctuate with this setting.
- *Bitrate* : defines encoding bitrate for the output video in kbps. Option available only if *Rate Control* set to CBR, ABR or VBR.
- *Use Custom Buffer Size* : when checked, enables custom buffer size settings. Option available only if *Rate Control* set to CBR, ABR or VBR.
  - *Buffer Size* : defines buffer size in kb.  
Tip: if *Buffer Size* = 0 then *Bitrate* limit ignored.
- *CRF* : defines Constant Rate Factor value of the encoder. Integer values [0..51] (e. g. [good...bad] quality). Option

available only if *Rate Control* set to VBR or CRF.

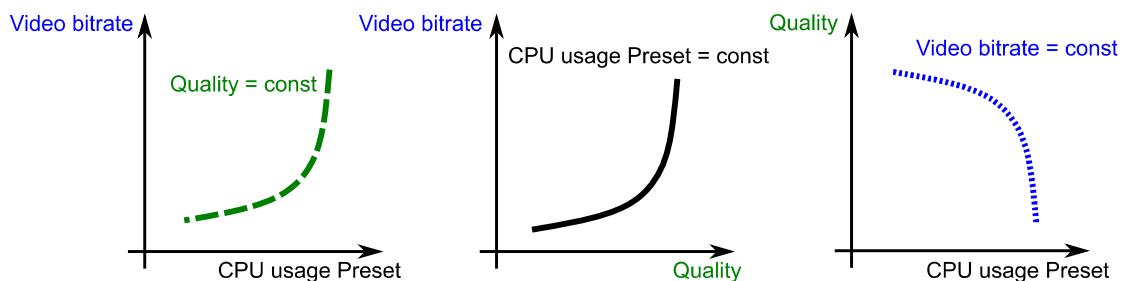
Tip: *CFR* = 0 force the high444 lossless profile.

- *Keyframe Interval (seconds, 0 = auto)* : force keyframes insertion into video by fixed time intervals, in seconds. If set to 0, then time intervals calculated automatically.

Tip: set *Keyframe Interval* manually if you experience long 'trails' and mpeg 'ghost' appearance. Lower values can raise bitrate of the encoding video.

- *CPU usage Preset (higher = less CPU)* : presets that increases scanning deep of the encoder algorithm for motion detection. Highest value is *ultrafast* (no scan). Lowest value is *placebo* (deep scan).

Tip: set *CPU usage Preset (higher = less CPU)* to *veryfast* or *superfast* - most modern CPUs unable to encode high resolution video in real-time under lower presets without frames drop. Lower presets generates video with lower bitrate at the same quality.



- *Profile* : defines compatibility with hardware players, sets some restrictions to maximum output bitrates.  
Tip: use the [Table 2.H264 profiles and levels](#) provided on page [70](#) and recommendations from your streaming Web server.
- *Tune* : encoder's presets for not typical encoding tasks.
- *Variable Framerate (VFR)* : if checked, encoder will pack video with variable frame rate.  
Tip: variable frame rate may have sync issues with different Web servers. Use it with caution.

- *x264 Options (separated by space)* : defines custom encoder settings, that overrides any preset settings; parameters separated with space. For example, *qp=24 bframes=0*

Tip: look for parameters list of the x264 encoder on the developer's internet page.

*Table 2.H264 profiles and levels*

level	Base & Main max kbps	High max kbps	Max Resolution@Frequency (reference frames)
3	10000	12500	352x480@61.4 (12) 352x576@51.1 (10) 720x480@30.0 (6) 720x576@25.0 (5)
3.1	14000	17500	720x480@80.0 (13) 720x576@66.7 (11) 1280x720@30.0 (5)
3.2	20000	25000	1280x720@60.0 (5) 1280x1024@42.2 (4)
4	20000	25000	1280x720@68.3 (9) 1920x1080@30.1 (4) 2048x1024@30.0 (4)
4.1	50000	62500	1280x720@68.3 (9) 1920x1080@30.1 (4) 2048x1024@30.0 (4)
4.2	62500	62500	1280x720@145.1 (9) 1920x1080@64.0 (4) 2048x1080@60.0 (4)
5	135,000	168,750	1920x1080@72.3 (13) 2048x1024@72.0 (13) 2048x1080@67.8 (12) 2560x1920@30.7 (5) 3672x1536@26.7 (5)
5.1	240,000	300,000	1920x1080@120.5 (16) 2560x1920@51.2 (9) 3840x2160@31.7 (5) 4096x2048@30.0 (5)

level	Base & Main max kbps	High max kbps	Max Resolution@Frequency (reference frames)
			4096x2160@28.5 (5) 4096x2304@26.7 (5)
5.2	240,000	300,000	1920x1080@172.0 (16) 2560x1920@108.0 (9) 3840x2160@66.8 (5) 4096x2048@63.3 (5) 4096x2160@60.0 (5) 4096x2304@56.3 (5)

## Recording tab

Recording tab available only in Output Mode: *Advanced* (See [Output mode](#) on page 65)

On the recording tab you can choose recording Type: *Standard* or *Custom Output (FFmpeg)*.

Tip: under recording Type: *Standard* available codec - x264, containers - flv, mp4, mov, mkv, ts, m3u8.

Tip: under recording Type: *Custom Output (FFmpeg)* many other containers and codecs are available.

Tip: to set recording Type to *Custom Output (FFmpeg)* Navigate to *Output* options in Settings window, click *Recording* tab, choose under the *Type* option, setting *Custom Output (FFmpeg)* from the drop-down list, and hit *Apply* button to save changes.

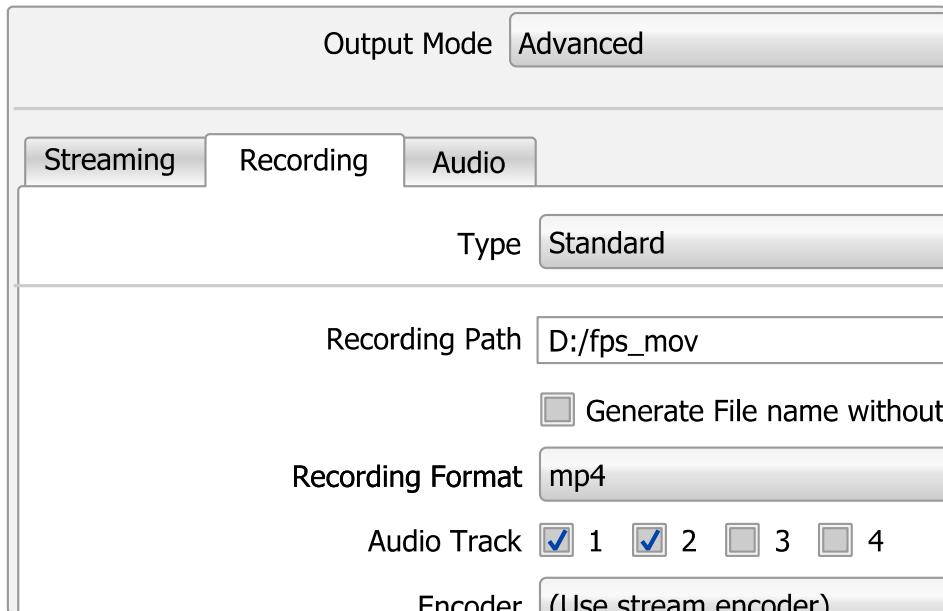
- *Type* : sets the output to Standard x264 codec and mp4, flv containers or to Custom with different container/codecs set.
- *Recording path* : specifies directory (folder) where new recordings will be stored.
- *Generate File Name without Space* : if checked, a new file name for a recording will not contain any spaces.
- *Recording format* : defines container format for

recordings.

Tip: use mp4 container if you plan to edit your recordings later. Use [Custom Muxer Settings](#) to write a fragmented mp4/mov file.

- *Audio Track* : # of the track and count of the audio tracks that will be encoded during recording. Maximum 4 audio tracks available for encode.

**Warning!** Certain formats (like FLV) do not support multiply tracks per recording.



Tip: use a modern player with ability to play more than one audio track in the movie (when more then one audio track is selected).

Tip: check selected tracks in [Advanced Audio Properties](#) on page 81.

- *Encoder* : switches presets between
  - *Use stream encoder* : when selected, uses streaming encoder settings defined on [Streaming tab](#) (See page 67)

Tip: when *Encoder: Use stream encoder* preset is selected, the recorded video will be the same quality as during streaming.

- *x264* : when selected, enables sets of options for the independent tuning of the recording

Tip: use *Encoder : x264* preset when you want to override encoder settings for recording. Useful for low bandwidth streaming and high-quality recording.

- *Rescale Output* : same as for [Streaming tab](#) on page [67](#).
- *Rate Control* : same as for [Streaming tab](#) on page [67](#).
- *Bitrate* : same as for [Streaming tab](#) on page [67](#).
- *Use Custom Buffer Size* : same as for [Streaming tab](#) on page [67](#).
  - *Buffer Size* : same as for [Streaming tab](#) on page [67](#).
- *CRF* : same as for [Streaming tab](#) on page [67](#).
- *Keyframe Interval (seconds, 0 = auto)* : same as for [Streaming tab](#) on page [67](#).
- *CPU usage Preset (higher = less CPU)* : same as for [Streaming tab](#) on page [67](#).
- *Profile* : same as for [Streaming tab](#) on page [67](#).
- *Tune* : same as for [Streaming tab](#) on page [67](#).
- *Variable Framerate (VFR)* : same as for [Streaming tab](#) on page [67](#).
- *x264 Options (separated by space)* : same as for [Streaming tab](#) on page [67](#).
  - “*Other\_codec\_name*” : when selected, enables sets of options for the independent tuning of the hardware based codec (depends on system).
- *Custom Muxer Settings* : defines custom muxer settings, that overrides any preset settings; parameters separated with space. For example, *movflags=frag\_keyframe min\_frag\_duration=4000000*

Tip: look for full parameters list of the ffmpeg muxer on the developer's internet page.

## Audio tab

Audio tab available only in Output Mode: *Advanced* (See [Output mode](#) on page [65](#))

Four tracks is available for configuration:

- Track 1
  - Audio Bitrate* : defines bitrate for encoding audio track #1 in kbps
  - Name* : defines a name for the audio track #1
- Track 2
  - Audio Bitrate* : defines bitrate for encoding audio track #2 in kbps
  - Name* : defines a name for the audio track #2
- Track 3
  - Audio Bitrate* : defines bitrate for encoding audio track #3 in kbps
  - Name* : defines a name for the audio track #3
- Track 4
  - Audio Bitrate* : defines bitrate for encoding audio track #4 in kbps
  - Name* : defines a name for the audio track #4

## Audio

Under settings *Audio* can be adjusted audio output sample rate, number of audio channels (Mono, Stereo etc.), default audio input devices and audio sources push-to-mute/push-to-talk delays.

*Sample Rate* : defines outputs sample rate (44100, 48000 Hz)

*Channels* : defines output channels settings (Stereo, Mono)

*Desktop Audio Device* : specifies device available as default for audio source Desktop Audio Device.

*Desktop Audio Device 2* : specifies device available as default for audio source Desktop Audio Device 2.

Tip: set *Desktop Audio Device 2* to disabled for simple mixing tasks.

*Mic/Auxiliary Audio Device* : specifies device available as default for Mic/Auxiliary Audio Device.

Tip: set it to your microphone's default input - if you not planning to switching live to different microphone's input (source), of course.

*Mic/Auxiliary Audio Device 2* : specifies device available as default for Mic/Auxiliary Audio Device 2.

Tip: use *Mic/Auxiliary Audio Device 2* in special cases only, other way set it to disabled.

*Mic/Auxiliary Audio Device 3* : specifies device available as default for Mic/Auxiliary Audio Device 3.

Tip: use *Mic/Auxiliary Audio Device 3* in special cases only, other way set it to disabled.

## Mic/Aux

- *Enable Push-to-mute* : if checked, Push-to-mute and delay is enabled for Mic/Aux devices.
  - *Push-to-mute* : defines push-to-mute delay length in milliseconds for Mic/Aux devices.
- *Enable Push-to-talk* : if checked Push-to-talk and delay is enabled for Mic/Aux devices.
  - *Push-to-talk* : defines push-to-talk delay length in milliseconds for Mic/Aux devices.

## Desktop Audio

- *Enable Push-to-mute* : if checked Push-to-mute and delay is enabled for Desktop Audio devices .

- *Push-to-mute* : defines push-to-mute delay length in milliseconds for Desktop Audio devices.
- *Enable Push-to-talk* : if checked Push-to-talk and delay is enabled for Desktop Audio devices.
  - *Push-to-talk* : defines push-to-talk delay length in milliseconds for Desktop Audio devices.

## Video

Video options adjusts the size of the canvas and output, specifies filter for scaling, defines framerate of the output.

[Output](#) options can override settings defined here, keep that in mind when selecting aspect ratio for main output. There are two possible situations described on the pictures [Output at same size](#) on page [77](#) and [Output at different sizes](#) on page [78](#), that can take place in OBS Studio.

*Base (Canvas) Resolution* : defines a canvas preview aspect ratio and base rendering resolution (canvas size).

*Output (Scaled) Resolution* : defines main output resolution.

Tip: if you are not sure, set *Base (Canvas) Resolution* = main input resolution (game resolution) = *Output (Scaled) Resolution*.

*Downscale Filter* : specifies filter used in scale operations between *Base (Canvas) Resolution* and *Output (Scaled) Resolution* setups.

Tip: if you setup *Base (Canvas) Resolution* = *Output (Scaled) Resolution*, then set *Downscale Filter* to Bilinear filter.

*Common FPS Values, [Integer FPS Value], [Fractional FPS Value]* : specifies sets of frame rate (fps) at which OBS Studio will render its output. [defines frame rate at which OBS Studio will render

its output – integer or fractional values accepted].

Tip: make attention, that for NTSC standard common value is 29.97 fps; for PAL – 25 fps. OBS Studio produce progressive frames.

*Disable Aero* : if checked, OBS Studio will try to disable Windows Aero.

Tip: Some transparent windows cannot be captured if Aero disabled.

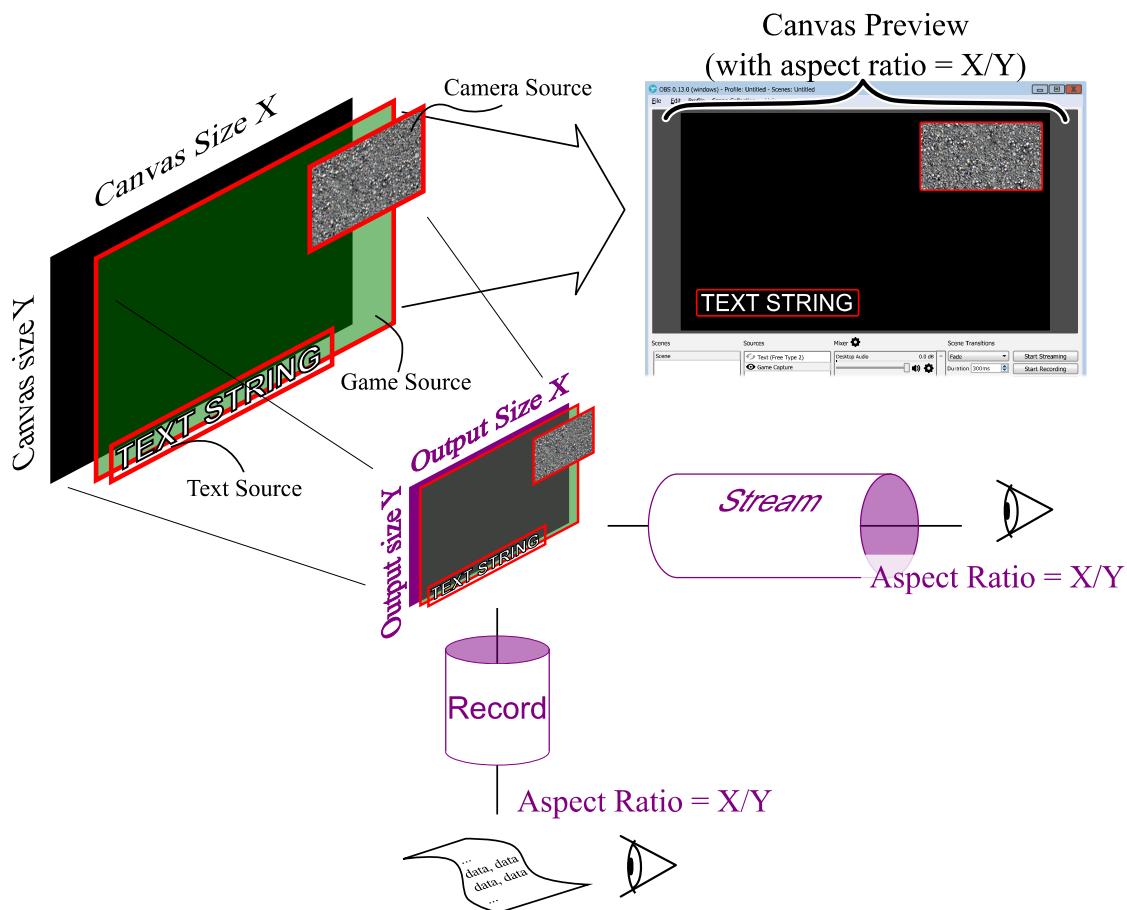


Illustration 7. Output at same size

Tip: if you use *Rescale Output* option (See [Output](#) settings on page 65), then aspect ratio of the output can differ from the aspect ratio of the preview canvas size.

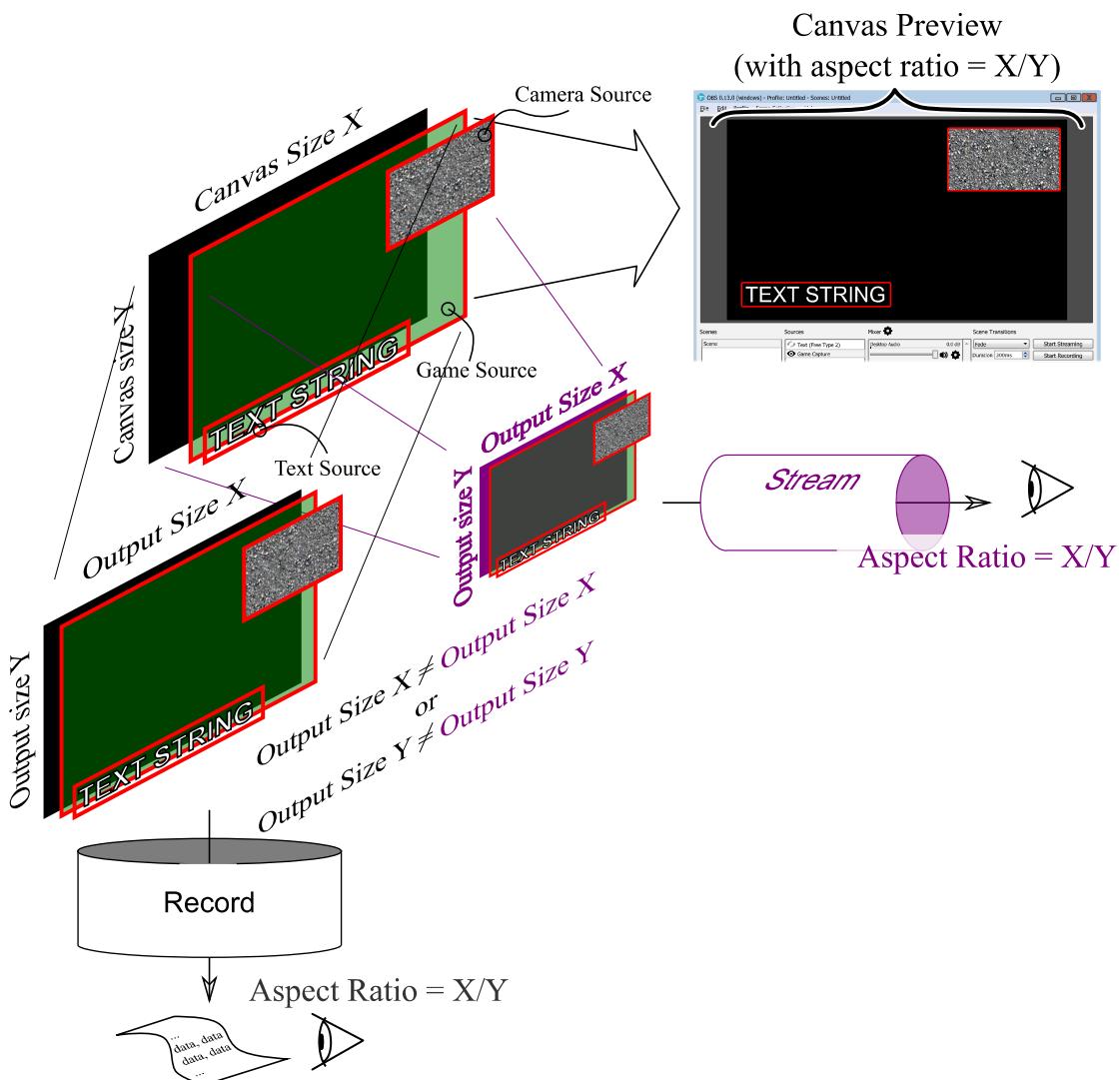


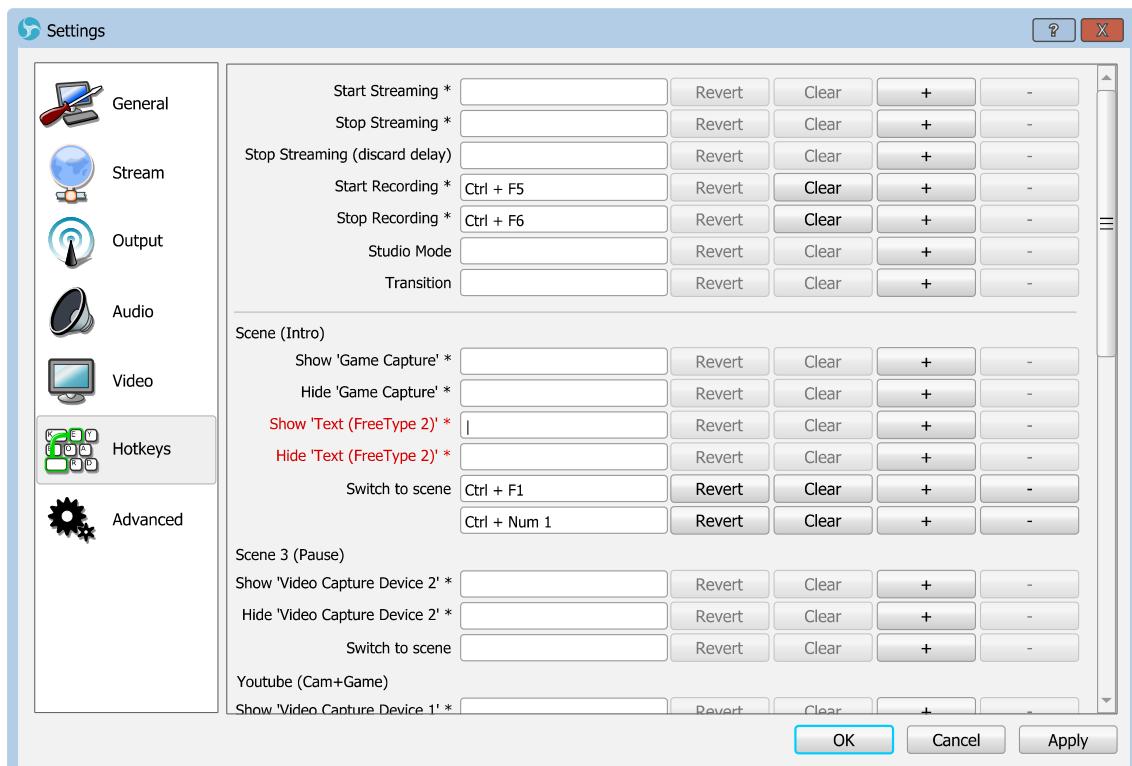
Illustration 8. Output at different sizes

Tip: if two resize task performed in output with different sizes via *Rescale Output*, then it can eat more CPU power. Use original size for the local recordings (together with fast profile), and scale down stream by *Rescale Output*. (See [Output settings](#) on page 65)

## Define Hotkeys

Hot-key can be defined via Settings dialog. Navigate to *Hotkeys* option in Settings window, choose a new action, click on empty

edit string field and hit desirable key shortcut. (See [Define hotkeys \(shortcuts\)](#) picture on page [79](#))



*Illustration 9. Define hotkeys (shortcuts)*

Each layer in scenes has independent control by hotkeys.  
By default, *Start Streaming*, *Stop Streaming*, *Start Recording*, *Stop Recording* hotkeys not defined.

You can add another one shortcut to the same action by clicking button.

To remove additional shortcut: click button.

You can remove shortcut linking by clicking button.

Click *OK* button to save changes and exit.

## Advanced Settings

Allows to you to change the base configuration settings.

Warning! Make changed to this tab with caution. Many options require program restart. Incorrect settings may result in low capture & streaming performance.

### Video

- *Renderer*: specifies renderer used by OBS Studio to render an output.
- *Video Adapter*: |not implemented yet.
- *Color format*: specifies color format for encoder's input (common value is *NV12*).
- *YUV Color Space*: specifies color space for encoder's input (common value is *601*).  
Tip: specify *YUV Color Space*: *709* for HD setups.
- *YUV Color Range*: specifies color range for encoder's input, i. e. how to encode it (common value is *Partial*).
- *Disable OSX V-Sync*: if checked, OS X V-Sync will be disabled for OBS Studio (option available for Mac PC).
- *Reset OSX V-Sync on Exit*: if checked, OS X V-Sync resets its state after OBS Studio close (option available for Mac PC).

### Recording

- *Filename formatting*: specifies filename mask to generate new filename for the recordings.  
Tip: default mask format *%CCYY-%MM-%DD %hh-%mm-%ss*, for example, means file name *2016-04-19 23-40-58* for recording started 19 April 2016 at 23:40:58 o'clock. Full list of acceptable variables available via hint message over the edit field *Filename formatting* of the application.
- *Overwrite if file exist*: if checked, files with same names should be overwritten.

## Stream Delay

- *Enable* : when checked, enables stream delay (“buffer”) feature.

Tip: with a setting *Stream Delay: Enable* checked, Stream output appears on-air later, but connection issues has lower impact on the stream smooth play.

- *Duration (seconds)* : defines duration of the stream delay in seconds.
- *Preserve cutoff point (increase delay) when reconnecting* : if checked, delay will grow after reconnecting, streaming data preserved.

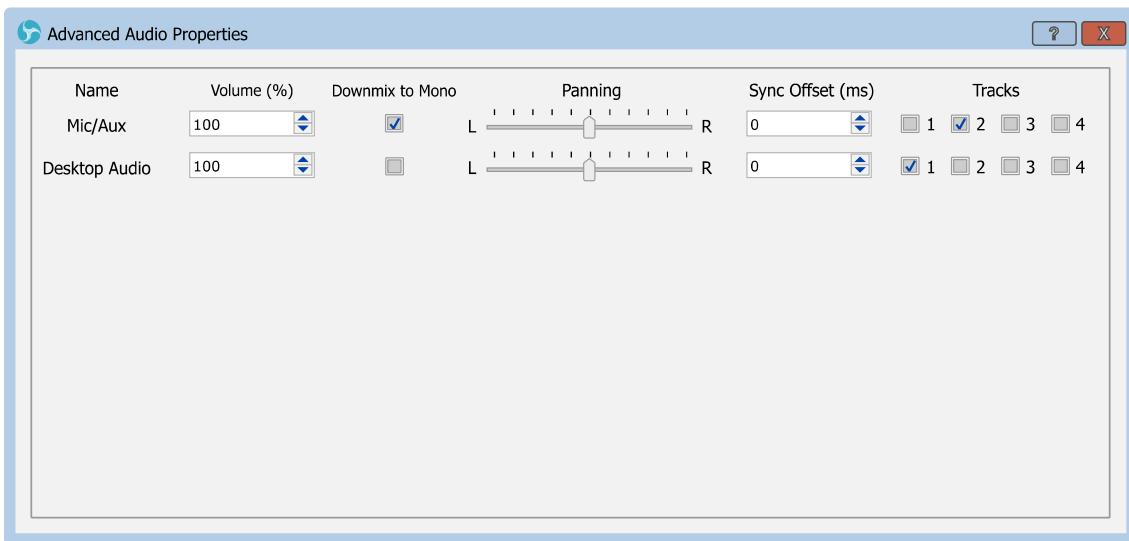
## Automatically Reconnect

- *Enable* : when checked, enables automatically reconnect feature
  - *Retry Delay (seconds)* : delay between connection attempts.
  - *Maximum Retries* : number of attempts to establish connection to the streaming server.

## Advanced Audio Properties

In Advanced Audio Properties you can define special mixing parameters, like channel balance, volume, track's # in media file and synchronization offset.

Advanced audio settings accessible through main menu *Edit*, sub-menu *Advanced Audio Properties*. Or you can click  icon at *Mixer settings* (main window).



**Name** : shows name of the input.

**Volume** : defines volume of the input in %.

**Downmix to Mono** : if checked, mixes sound track to mono before encoding.

Tip: check *Downmix to Mono* option for voice capture. Thus, you can set lower value of the audio bitrate for this track, without significant quality loss.

**Panning** : defines channel balance, volume level between Right (R) and Left (L) channel.

**Sync Offset (ms)** : defines synchronization offset of the input, in milliseconds (negative values are accepted).

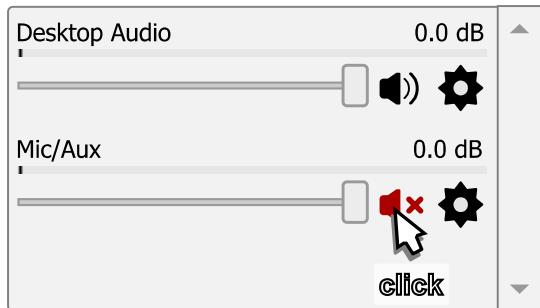
Tip: set *Sync Offset (ms)* to negative value, if your microphone's sound appears too late. Set *Sync Offset (ms)* to positive value, if sound appear ahead of the video.

**Tracks** : specifies the # of the track in a stream/file, where input will be encoded.

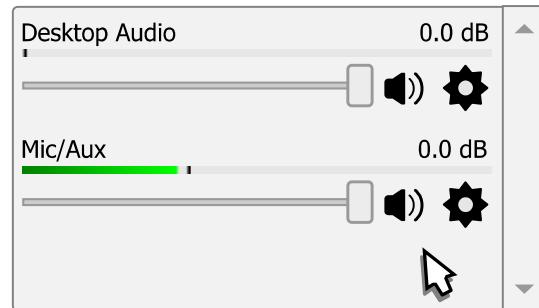
Tip: set the Track #1 checked for all inputs you want to hear in the stream. And specify this inputs as separate tracks for Track #2, 3, 4, for recording job, which is running simultaneously.

Make sure, that audio source not muted in *Mixer* list

1



2



See [Enable audio source](#) on page [29](#).

# Command Line Options

## About Command Line Options

OBS Studio supports additional command line keys to run specific tasks and troubleshoot setups.

## Command Line Keys

You can specify two and more keys simultaneously. Each key separated with space and begins with double minus if other not mentioned.

For full list of supported commands see [Table 3. Command Line Keys](#) on page [85](#).

Table 3. Command Line Keys

Command line key	Description	Example (Windows)
--portable -p	Runs OBS Studio in portable mode (profiles stored in application's home folder)	obs32.exe --portable obs64.exe --portable obs32.exe -p
--startrecording	OBS Studio starts Recording immediately	obs32.exe --startrecording obs64.exe --portable --startrecording
--startstreaming	OBS Studio starts Streaming immediately	obs32.exe --startstreaming obs64.exe --portable --startstreaming
--collection [scene_collection_name]	Scene Collection with name scene_collection_name will be loaded instead of last used	obs32.exe --collection MyNewScenes1
--profile [profile_name]	Profile with name profile_name will be loaded instead of last used	obs32.exe --profile MyProfileForRec1
--scene [scene_name]	Scene with name scene_name will be specified as current instead of last used in current Scene Collection	obs32.exe --scene MyBlankScene1 “obs64.exe --startrecording --profile Rec1 --collection SkypeCall1 --scene SkypeFullscreen1”

Tip: if name of a scene contains space symbols, place full name in double quote like in this example,

*obs64.exe --startrecording --collection SkypeCall1 --scene “Skype Fullscreen 1”*

# Linux Shortcuts

## Positioning sources

Result	Action
Center to canvas	<i>Ctrl + D</i>

## Transform sources

Result	Action
Fit to canvas (screen)	<i>Ctrl + F</i>
Stretch to canvas (screen)	<i>Ctrl + S</i>
Reset Transform	<i>Ctrl + R</i>

## Layers shift

Result	Action
Move one level Up	<i>Ctrl + Up</i>
Move one level Down	<i>Ctrl + Down</i>
Raise to Top	<i>Ctrl + Home</i>
Lower to Bottom	<i>Ctrl + End</i>

Default actions not global. Works only when OBS Studio main window in focus (active).

# Mac Shortcuts

## Positioning sources

Result	Action
Center to canvas	<i>Ctrl + D</i>

## Transform sources

Result	Action
Fit to canvas (screen)	<i>Ctrl + F</i>
Stretch to canvas (screen)	<i>Ctrl + S</i>
Reset Transform	<i>Ctrl + R</i>

## Layers shift

Result	Action
Move one level Up	<i>Ctrl + Up</i>
Move one level Down	<i>Ctrl + Down</i>
Raise to Top	<i>Ctrl + Home</i>
Lower to Bottom	<i>Ctrl + End</i>

Default actions not global. Works only when OBS Studio main window in focus (active).

# Windows Shortcuts

## Positioning sources

Result	Action
Center to canvas	<i>Ctrl + D</i>

## Transform sources

Result	Action
Fit to canvas (screen)	<i>Ctrl + F</i>
Stretch to canvas (screen)	<i>Ctrl + S</i>
Reset Transform	<i>Ctrl + R</i>

## Layers shift

Result	Action
Move one level Up	<i>Ctrl + Up</i>
Move one level Down	<i>Ctrl + Down</i>
Raise to Top	<i>Ctrl + Home</i>
Lower to Bottom	<i>Ctrl + End</i>

Default actions not global. Works only when OBS Studio main window in focus (active).

# Legal Notices

## Copyright

Current version of the Open Broadcaster Software MultiPlatform Help Guide distributed under the

GNU GENERAL PUBLIC LICENSE Version 2, June 1991

Copyright (C) 1989, 1991 Free Software Foundation, Inc., 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA  
Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.

### Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public License is intended to guarantee your freedom to share and change free software--to make sure the software is free for all its users. This General Public License applies to most of the Free Software Foundation's software and to any other program whose authors commit to using it. (Some other Free Software Foundation software is covered by the GNU Lesser General Public License instead.) You can apply it to your programs, too.

When we speak of free software, we are referring to freedom, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish), that you

receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid anyone to deny you these rights or to ask you to surrender the rights. These restrictions translate to certain responsibilities for you if you distribute copies of the software, or if you modify it.

For example, if you distribute copies of such a program, whether gratis or for a fee, you must give the recipients all the rights that you have. You must make sure that they, too, receive or can get the source code. And you must show them these terms so they know their rights.

We protect your rights with two steps: (1) copyright the software, and (2) offer you this license which gives you legal permission to copy, distribute and/or modify the software.

Also, for each author's protection and ours, we want to make certain that everyone understands that there is no warranty for this free software. If the software is modified by someone else and passed on, we want its recipients to know that what they have is not the original, so that any problems introduced by others will not reflect on the original authors' reputations.

Finally, any free program is threatened constantly by software patents. We wish to avoid the danger that redistributors of a free program will individually obtain patent licenses, in effect making the program proprietary. To prevent this, we have made

it clear that any patent must be licensed for everyone's free use or not licensed at all.

The precise terms and conditions for copying, distribution and modification follow.

## GNU GENERAL PUBLIC LICENSE TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License applies to any program or other work which contains a notice placed by the copyright holder saying it may be distributed under the terms of this General Public License. The "Program", below, refers to any such program or work, and a "work based on the Program" means either the Program or any derivative work under copyright law: that is to say, a work containing the Program or a portion of it, either verbatim or with modifications and/or translated into another language. (Hereinafter, translation is included without limitation in the term "modification".) Each licensee is addressed as "you".

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running the Program is not restricted, and the output from the Program is covered only if its contents constitute a work based on the Program (independent of having been made by running the Program). Whether that is true depends on what the Program does.

1. You may copy and distribute verbatim copies of the Program's source code as you receive it, in any medium,

provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and give any other recipients of the Program a copy of this License along with the Program.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Program or any portion of it, thus forming a work based on the Program, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

a) You must cause the modified files to carry prominent notices stating that you changed the files and the date of any change.

b) You must cause any work that you distribute or publish, that in whole or in part contains or is derived from the Program or any part thereof, to be licensed as a whole at no charge to all third parties under the terms of this License.

c) If the modified program normally reads commands interactively when run, you must cause it, when started running for such interactive use in the most ordinary way, to print or display an announcement including an appropriate copyright notice and a notice that there is no warranty (or else, saying

that you provide a warranty) and that users may redistribute the program under these conditions, and telling the user how to view a copy of this License. (Exception: if the Program itself is interactive but does not normally print such an announcement, your work based on the Program is not required to print an announcement.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Program, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Program, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Program.

In addition, mere aggregation of another work not based on the Program with the Program (or with a work based on the Program) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

### 3. You may copy and distribute the Program (or a work based

on it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you also do one of the following:

- a) Accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,
- b) Accompany it with a written offer, valid for at least three years, to give any third party, for a charge no more than your cost of physically performing source distribution, a complete machine-readable copy of the corresponding source code, to be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,
- c) Accompany it with the information you received as to the offer to distribute corresponding source code. (This alternative is allowed only for noncommercial distribution and only if you received the program in object code or executable form with such an offer, in accord with Subsection b above.)

The source code for a work means the preferred form of the work for making modifications to it. For an executable work, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the executable. However, as a special exception, the source code distributed need not include anything that is normally distributed (in either source or binary form) with the major

components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

If distribution of executable or object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place counts as distribution of the source code, even though third parties are not compelled to copy the source along with the object code.

4. You may not copy, modify, sublicense, or distribute the Program except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense or distribute the Program is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

5. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Program or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Program (or any work based on the Program), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Program or works based on it.

6. Each time you redistribute the Program (or any work based on the Program), the recipient automatically receives a license from the original licensor to copy, distribute or modify the Program subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties to this License.
7. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Program at all. For example, if a patent license would not permit royalty-free redistribution of the Program by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Program.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of

protecting the integrity of the free software distribution system, which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

8. If the distribution and/or use of the Program is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Program under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.

9. The Free Software Foundation may publish revised and/or new versions of the General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Program specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of

any later version published by the Free Software Foundation. If the Program does not specify a version number of this License, you may choose any version ever published by the Free Software Foundation.

10. If you wish to incorporate parts of the Program into other free programs whose distribution conditions are different, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

#### NO WARRANTY

11. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR

AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

as part of the OBS Studio software.

# Index

## Add

- Add new video source to OBS Studio scene 26
- Advanced Audio Properties 81
- Advanced Settings 80
- An Overview 7
- Application Settings 63
- Applying Filters for Special Effects 44
- Audio 74
- Audio/Video Filters 55
- Audio Capture Device (ALSA) 40
- Audio Input Capture 39
- Audio Output Capture 39
- Disable audio source 29
- Enable audio source 29

## Base

- Base (Canvas) Resolution 76

## Chroma

- Chroma Key 54
- Color Correction 52
- Color Key 53
- Command Line Options 84
- Command Line Keys 84
- Configure source 29
- Creating Scenes in OBS Studio 17
- Crop filter 50
- Custom Muxer Settings 73
- Cut 22

## Define

---

Define Hotkeys 78

Deinterlacing filter 49

Disable audio source 29

Display Capture 33

Downscale Filter 76

## Edit

Edit menu 14

Effects Filters 50

Enable audio source 29

easy cropping 48

exit Studio Mode 60

## File

Fade 22

Fade to Color 23

File menu 15

filter 44

Full screen preview (source) 31

## Gain

Gain 55

Game Capture 35

Game Capture (Syphon) 37

General Settings 63

Getting Sources into OBS Studio 25

green screen 54

## H

Help menu 11

## Image

Image Mask/Blend 52

Image 31

Introduction 5

## JACK

JACK Input Client 40

## K

## Layer

Layer shift (order) 43

Legal Notices 89

Linux Shortcuts 86

Looking at the Work Area 11

## Mac shortcuts

Mac Shortcuts 87

Manage Profiles 62

Media Source 32

Mixer 81

## Noise

Noise Gate 55

## Output

Output 65

Output mode 65

Output (Scaled) Resolution 76

## Post

Post OBS Studio log-file 12

Profile menu 13

## Q

## Recording

Recording 56

Recording and Streaming 56

Recording tab 71

Remove source 30

Rename scene 19

Rename source 30

## Scene

Creating Scenes in OBS Studio 17

Scene Collections menu 12

Scene transitioning 21

Screen Capture (XSHM) 34

Scroll 53

Sharpen 54

Slide 23

Source properties 31

    Audio Capture Device (ALSA) 40

    Audio Input Capture 39

    Audio Output Capture 39

    Display Capture 33

    Game Capture 35

    Game Capture (Syphon) 37

    Image 31

    JACK Input Client 40

    Media Source 32

    Screen Capture (XSHM) 34

    Text (Free Type 2) 33

    Video Capture Device 37

    Window Capture 34

    Window Capture (Xcomposite) 35

Stream settings 64

Streaming 57

Streaming tab 67

Studio Mode 58

Swipe 23

## Temporary

Temporary disable source 29

Temporary enable source 29

Text (Free Type 2) 33

Themes 61

Transform filter 45

Transform options (dependencies) 46

Transitions types 22

Using

Using Layers 41

Video

Video 76

Video Capture Device 37

Video Delay (Async) 55

What's new

What's New in OBS Studio 9

Window Capture 34

Window Capture (Xcomposite) 35

Windows Shortcuts 88

Working with sources (positioning) 18

X

Y

Z