

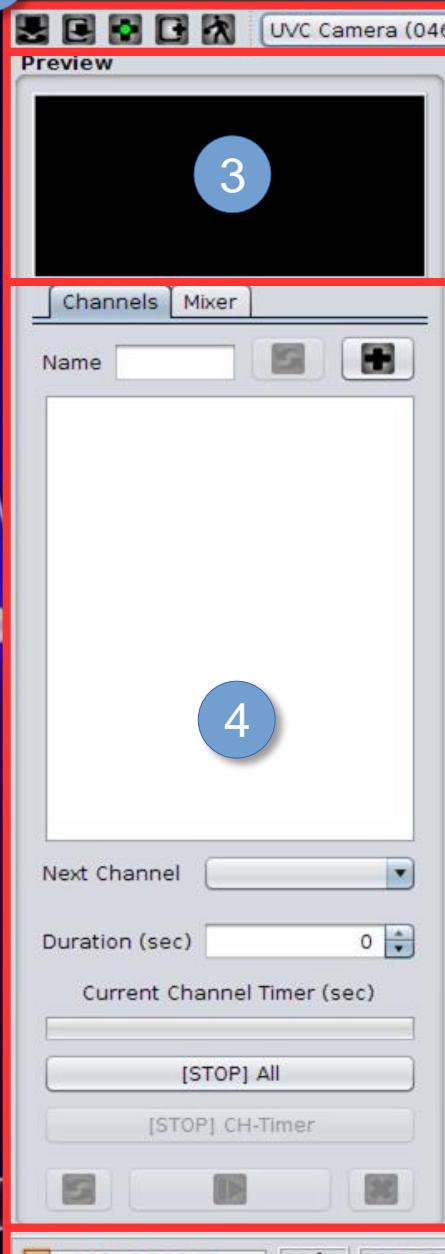
# WebcamStudio 0.6x

## QuickStart Guide



1

WebcamStudio 0.64 (517)

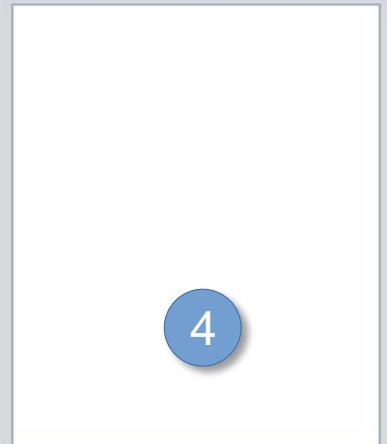


2

3

Channels Mixer

Name

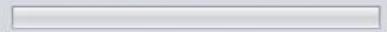


Next Channel

Duration (sec)

0

Current Channel Timer (sec)



[STOP] All

[STOP] CH-Timer

105MB/873MB

25 fps

720X480

9

Output

SkyCam (Beta)

V4l2loopback

FlipSkyCam

Record

UDP Mpeg2 Out (Min 25fps)

WStudioVideo Device (0x0000) (2)

IceCast

JustinTv

Ustream

Vaughn Tv

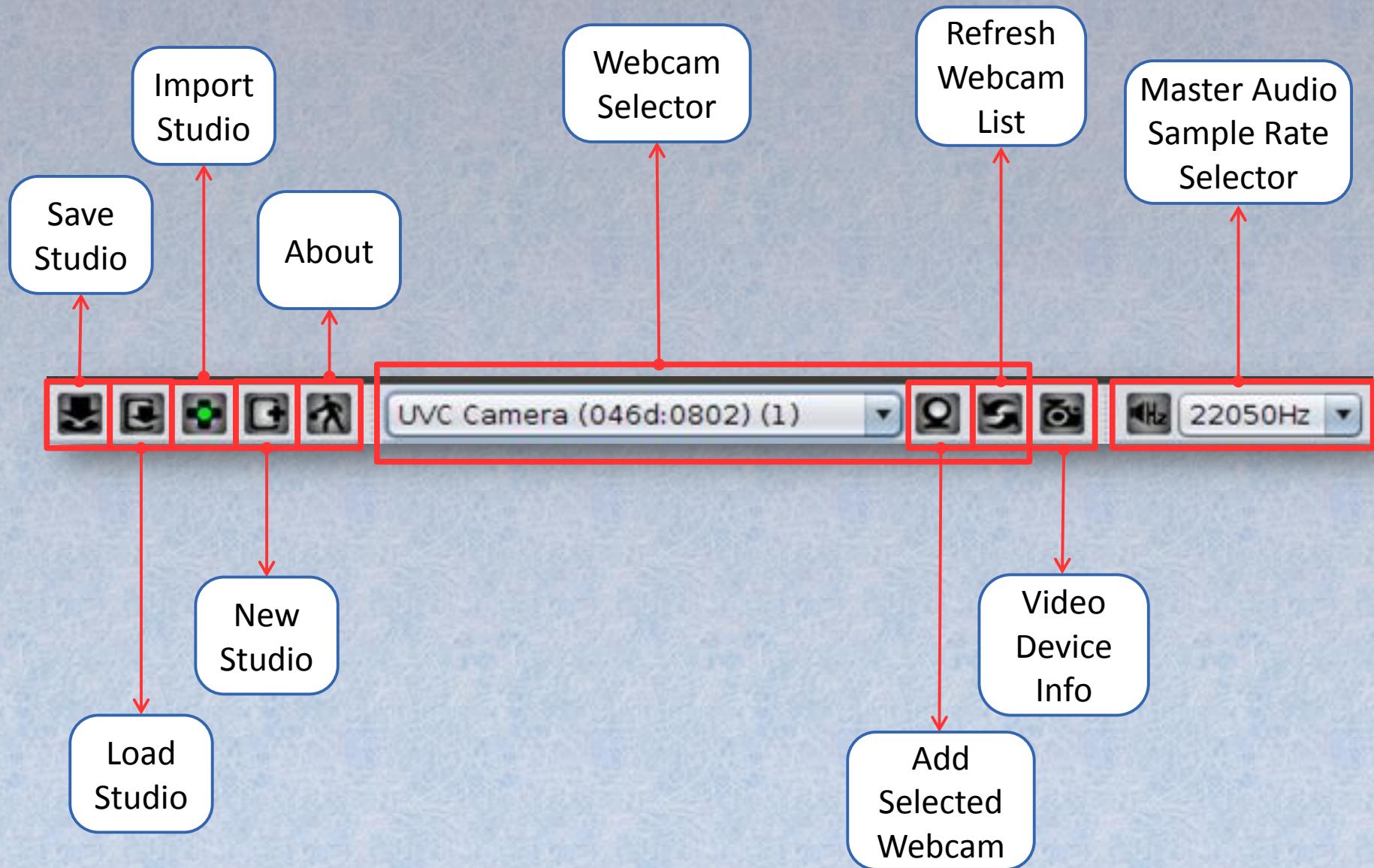
6

Properties

7

- 1 Main Tool-bar
- 2 Media Tool-bar
- 3 Preview Window
- 4 Master-Panel
- 5 Stream-Desktop
- 6 Output-Panel
- 7 Source Controls
- 8 Resource Monitor
- 9 Info-bar

# 1. Main Tool-bar



# Main Tool-bar

## Save Studio

Saves current Studio to a file. This operation will stop any playing Stream in the current Studio.

## Load Studio

Load a previously saved Studio from a file. This operation will stop and close any loaded Stream/Studio.

## Import Studio

Add a previously saved Studio from a file to the current Studio. This operation will not stop any playing stream.

## About

Information about WebcamStudio.

## Webcam Selector

Let you choose between detected video capture devices.

## Add Selected Webcam

If pressed, adds the selected webcam in “Webcam Selector” List, to the Stream Desktop.

# Main Tool-bar

## Refresh Webcam List

If pressed, adds to “Webcam Selector” list all video devices plugged in after WebcamStudio starts. (Force Redetection)

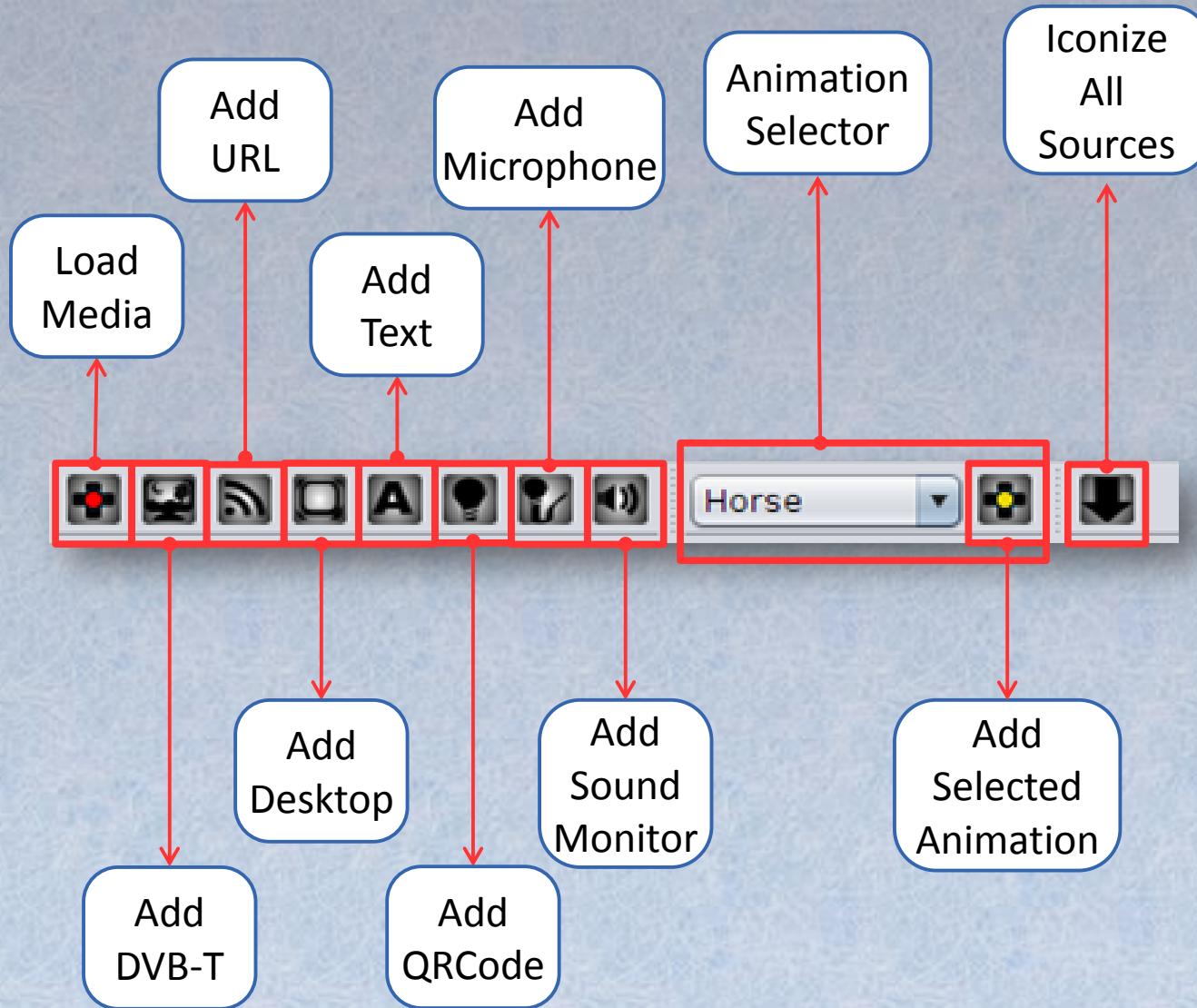
## Video Device Info

Gives information about All system's video devices.

## Master Audio Sample Rate Selector

Switch between 44100Hz and 22050Hz to set the current audio output sample rate. This operation will stop any playing Stream in the current Studio.

## 2. Media Tool-bar



# Media Tool-bar

## Load Media

Load a media file in the Stream-Desktop. Supported formats are: Avi, Mp4, Mov, Wmv, Png, Jpg, Gif, Mp3, Ogv, Ogg, Wav, M4a, Aac, Mkv.

## Add DVB-T

Add a new DVB-T Stream-Panel to the Stream-Desktop. (Needs a DVB-T adapter)

## Add URL

Add a new URL Stream-Panel to the Stream-Desktop.

## Add Desktop

Add a new Desktop Stream-Panel to the Stream-Desktop.

## Add Text

Add a new Text Stream-Panel to the Stream-Desktop.

## Add QRCode

Add a new QRCode Stream-Panel to the Stream-Desktop.

# Media Tool-bar

## Add Microphone

Add a new Microphone Stream-Panel to the Stream-Desktop.

## Add Sound Monitor

Add a new Sound-Monitor Stream-Panel to the Stream-Desktop.

## Animation Selector

Lets you select between built-in animations Gifs.

## Add Selected Animation

Add the current animation showed in the Selector to the Stream-Desktop.

## Iconize all Sources

Iconize all Stream-Panels in the Stream-Desktop

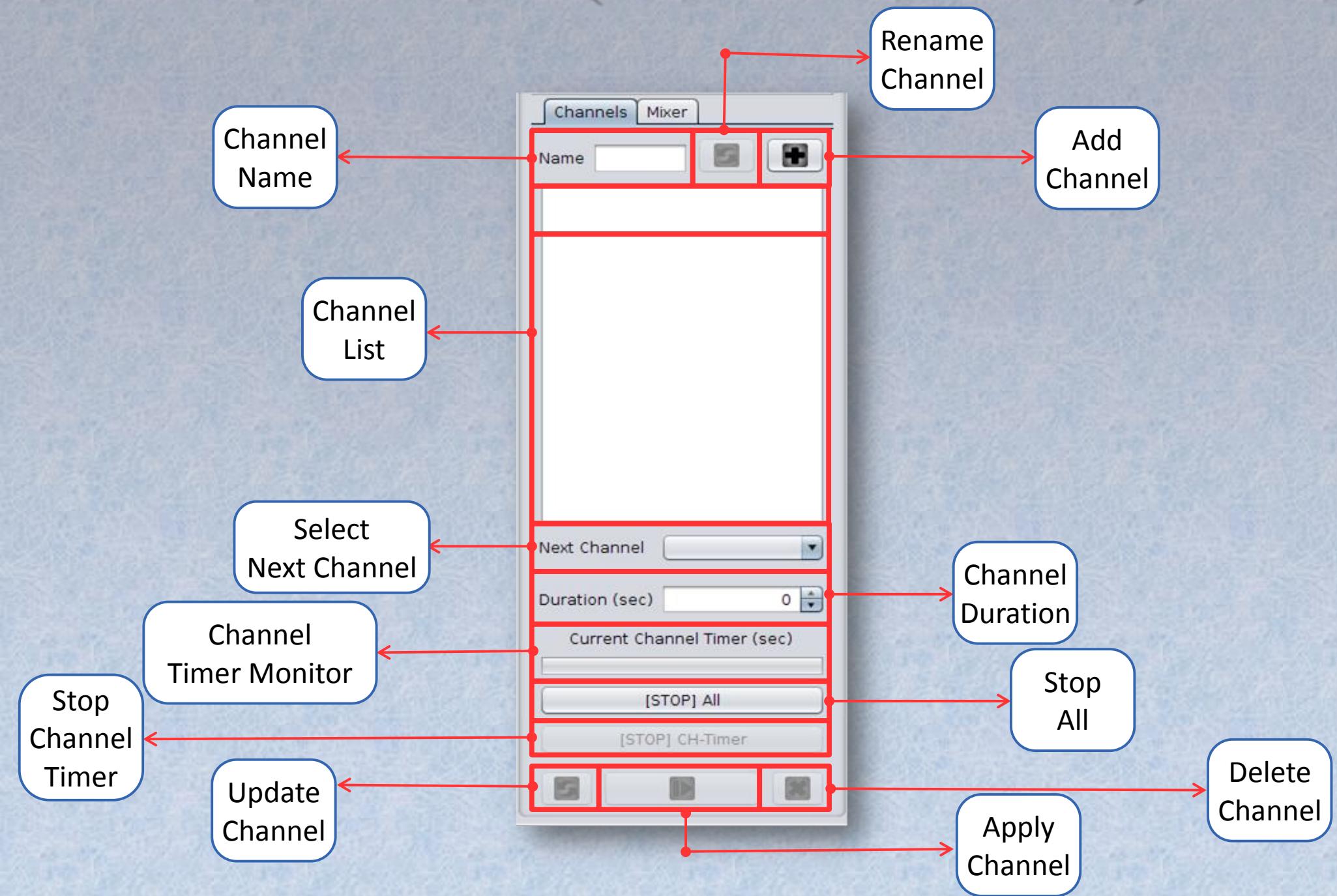
# 3. Preview Window



## Preview Window

In this window you can see the current Studio preview, as it will appear in the output streaming.

# 4. Master-Panel (Channels Panel)



# Master-Panel (Channels Panel)

## Channel Name

Type here the desired Channel Name.

## Add Channel

Add a new Channel to the list with the chosen Name.

## Rename Channel

Rename the current selected Channel In the “Channel List” with the one typed in the “Channel Name” field.

## Select Next Channel

Select the Next Channel to be played for the Current selected Channel, from the drop down menu.(Needs The duration to be set)

## Channel Duration

Specify the current selected channel duration.

## Channel Timer Monitor

Displays the current playing channel time position.

# Master-Panel (Channels Panel)

## Stop Channel Timer

Stop the current playlist. The running streams will not be stopped.

## Apply Channel

Play the selected Channel in the Channel List.

## Update Channel

Update the selected channel Streams status.

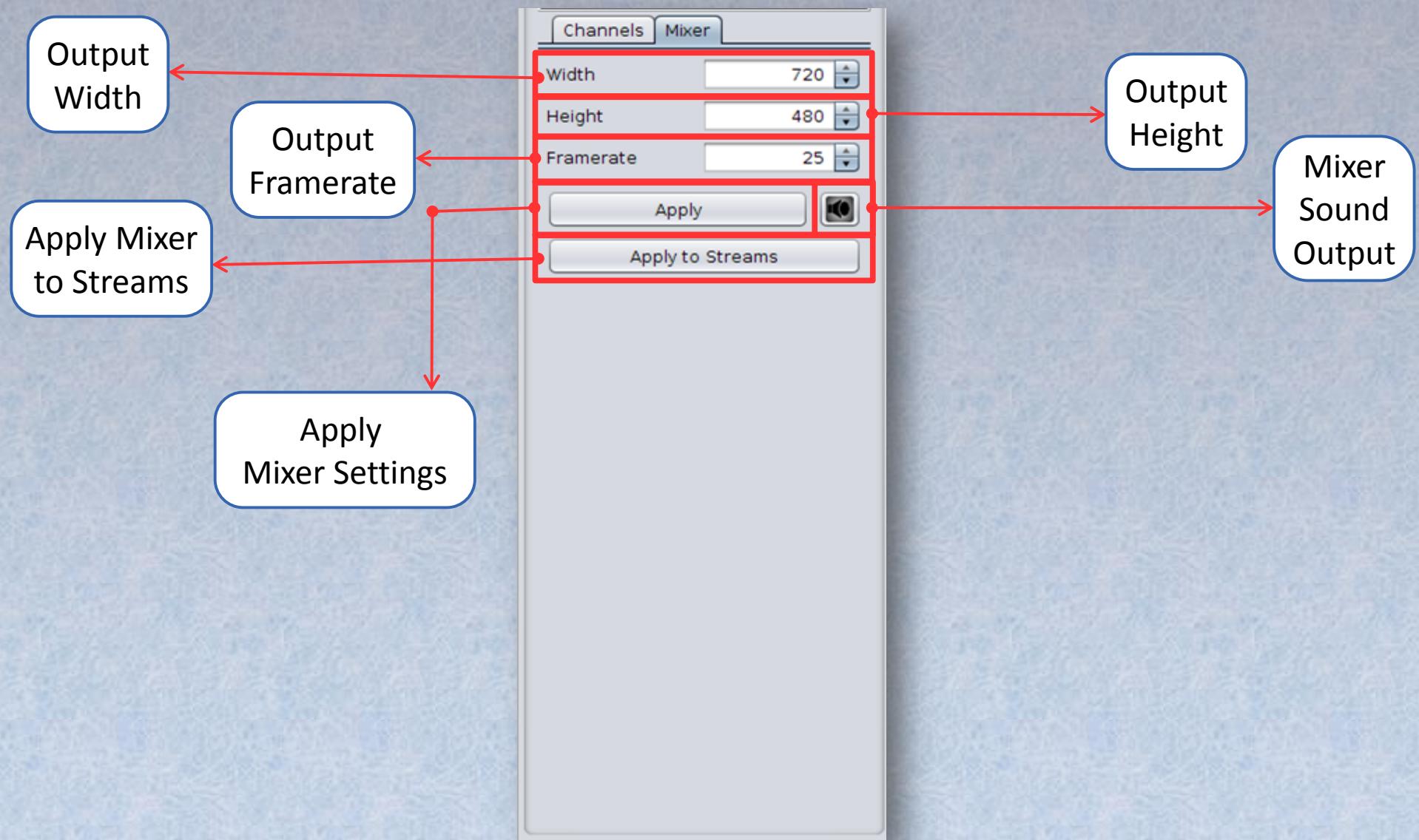
## Delete Channel

Delete the current selected channel in the Channel List.

## Stop All

Stop all Sources, Outputs, and Sinks.

# 4. Master-Panel (Mixer Panel)



# Master-Panel (Mixer Panel)

## Output Width

The current overall Studio Output Width resolution.

## Output Height

The current overall Studio Output Height resolution.

## Output Framerate

The current Studio Output FPS.

## Apply Mixer Settings

Apply the selected value from Width, Height and fps to the current Studio. This one not affect the already loaded streams. It also do a MasterMixer RESET.

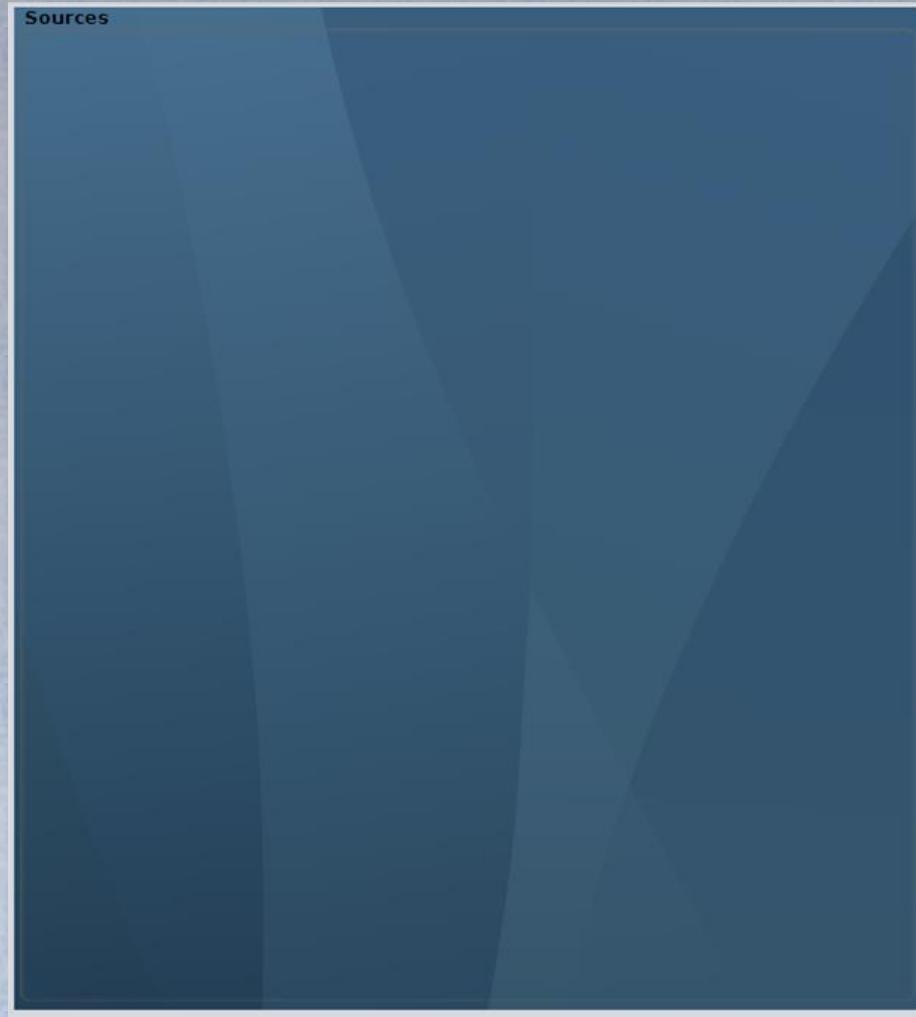
## Mixer Sound Output

If pressed, the current Studio Output will be available trough the system speakers.

## Apply Mixer to Streams

This button will apply the Mixer Width, Height and fps proportionally to all current Studio loaded streams.

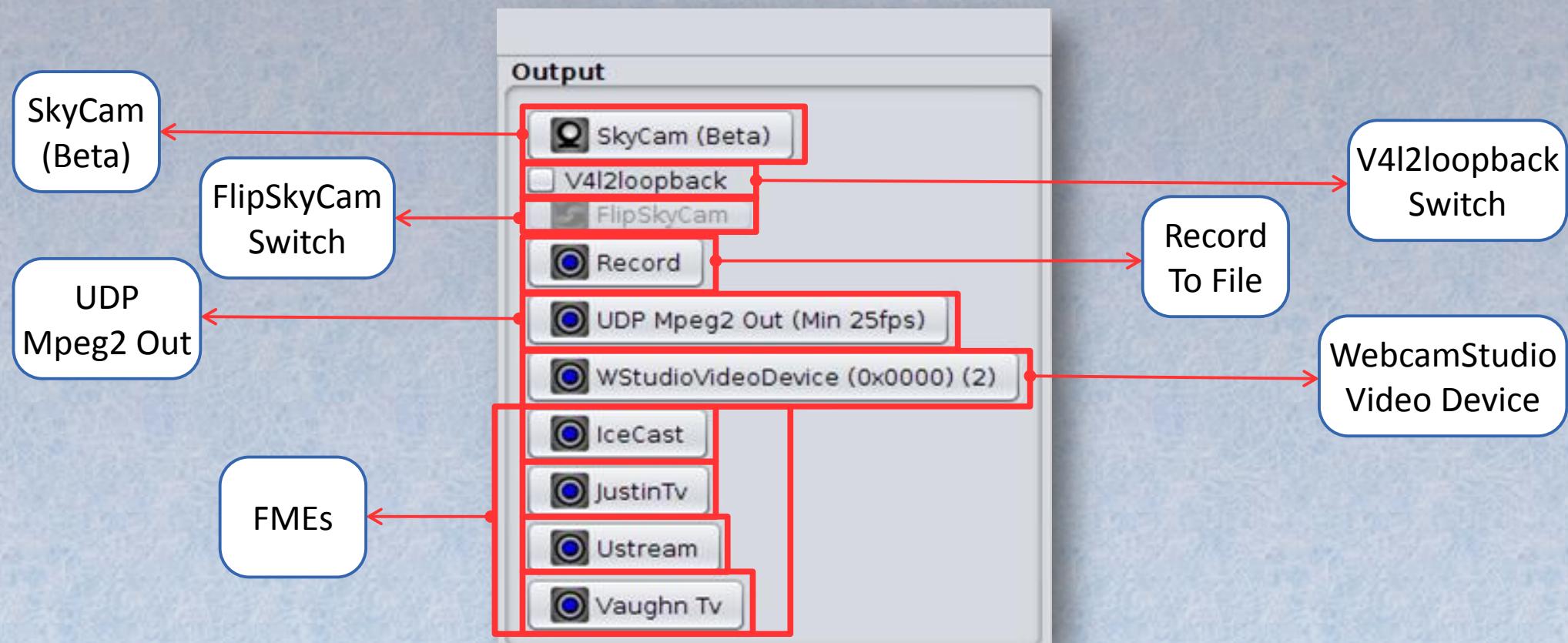
# 5. Stream-Desktop



## Stream-Desktop

In this window you can see all the currently loaded Streams of the Studio. You can also Drag'n'Drop your media files here.

# 6. Output-Panel



# Output-Panel

## SkyCam (Beta)

This button tries to give to “WebcamStudio video device” the Flash and Skype Compatibility. You can safely activate or deactivate SkyCam Button only when all the virtual webcams are not busy by others software/sites. Before activating check that all your application are not playing a virtual camera. SkyCam is the script that transcode the default WStudioVideoDevice in another “on the fly” created /dev/video21 virtual camera. This last is usable in flash applications ... To use it you have to push “SkyCam(Beta)”, enter sudo password, and then push the WStudioVideoDevice to activate the Video Output.

On /dev/video21 you will have the flash compatible cam.

## V4l2loopback Switch

This switch is used in the case you have installed V4l2loopback original module instead of the WebcamStudio Video Device Fork.

## FlipSkyCam Switch

If pressed, The SkyCam /dev/video21 will be Horizontally Flipped. This is used for Skype correct visualization. Usually in Flash Application you don't need this.

# Output-Panel

## Record to File

You can record the WebcamStudio Output to a Mp4, AVI or OGV file (Capture).

## UDP Mpeg2 Out

If pressed, you will have a Mpeg2 Stream on `udp://127.0.0.1:7000`. Be sure that the Mixer fps setting is at least “25”.

## WebcamStudio Video Device

This is the WebcamStudio Virtual Video Device.

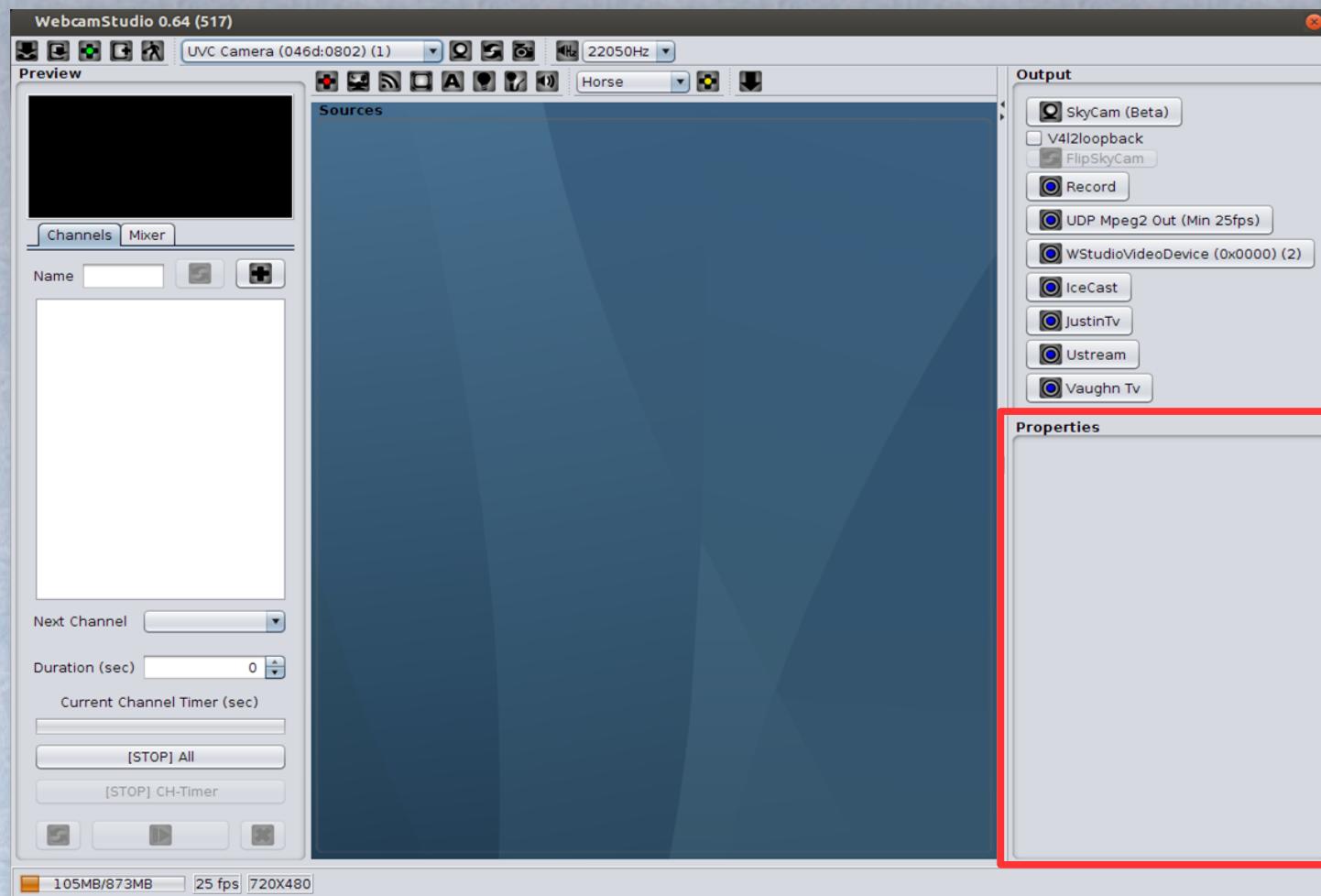
## FMEs

Those Buttons are the FME Outputs (Flash Media Encoder). You can add them to WebcamStudio By Editing the correct FME.xml and then Dragging them in the Output-Panel.

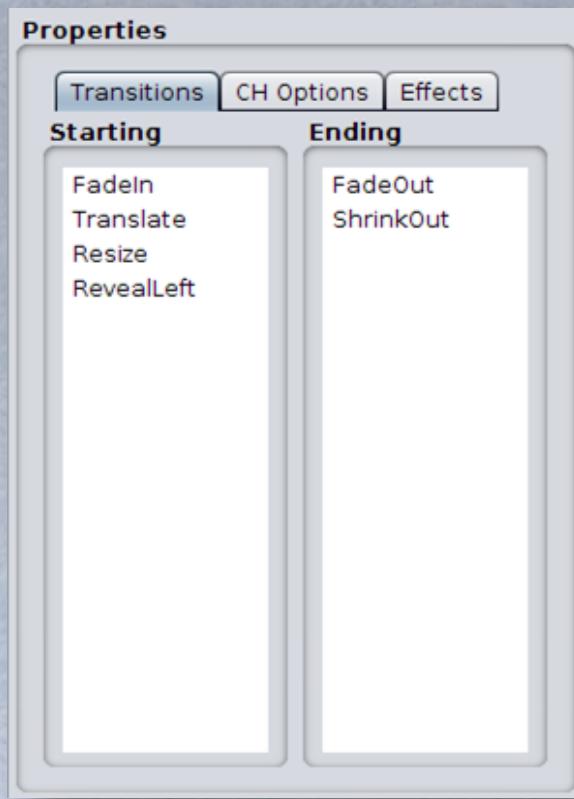
# 7. Source Controls

When you select a Media Stream-Panel on the Desktop, in the lower right corner will be displayed some Stream Options.

The Source Controls TABS vary depending of the Media type.



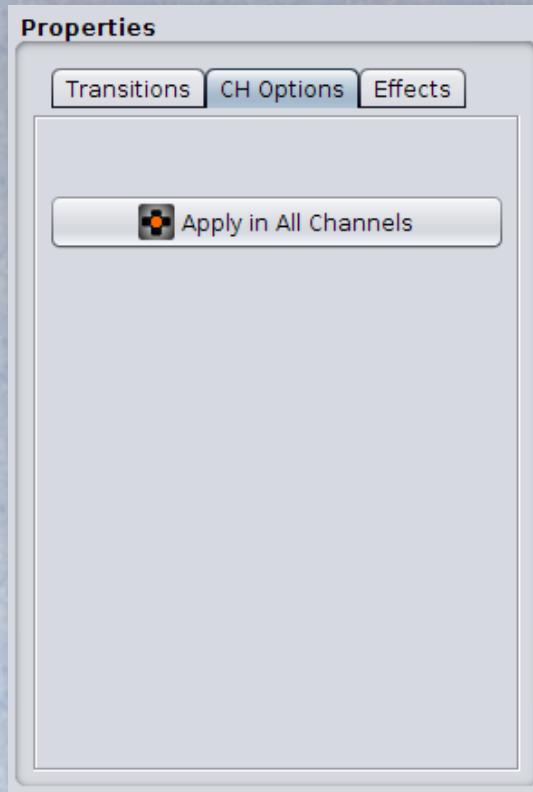
# 7. Source Controls (Transitions)



## Transitions

Here you can select the starting and ending Channel Transition for the current selected Stream-Panel Media. The Transitions works only if at least a channel has been created. The Transitions usage will be explained better later in this Guide.

# 7. Source Controls (CH Options)

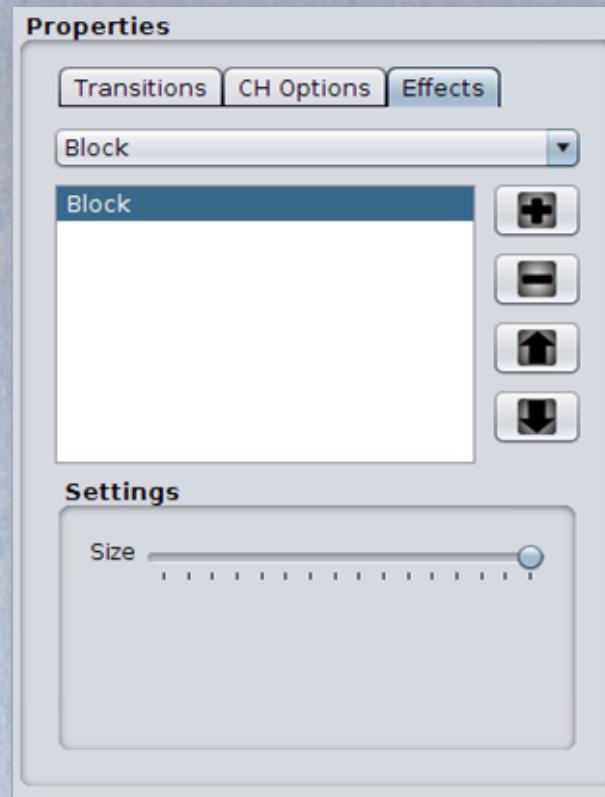


## CH Options

Starting From version 0.64 r515 onwards when you add a stream to a Studio, all channels will be added automatically to the added stream. This implicates that when you will play a different channel, the added stream will stops.

If you need to add a stream to an existing studio ( usually a logo or a text ...) that have to be played on every channels in the studio, with the current settings, you will have to push the button "Apply in all Channels" under the "CH Options" tab.

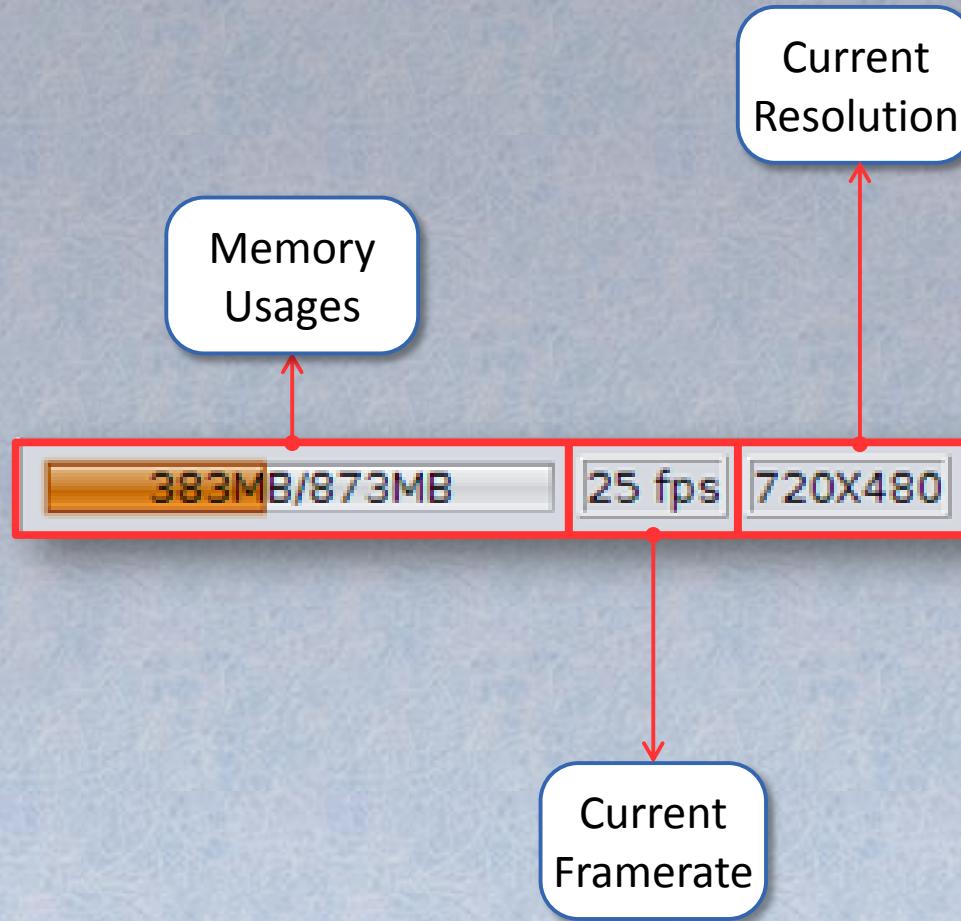
# 7. Source Controls (Effects)



## Effects

Here you can select an Effect from the drop down menu and then apply it to the stream pressing the [+] button. You can also Remove [-] the effect or move it up and down with the arrows. Depending on the selected effect, in the “Settings” Pane will be displayed any related Effect options.

# 8. Resource Monitor



## Memory Usages

Here you can see the current allocated memory WebcamStudio is using.

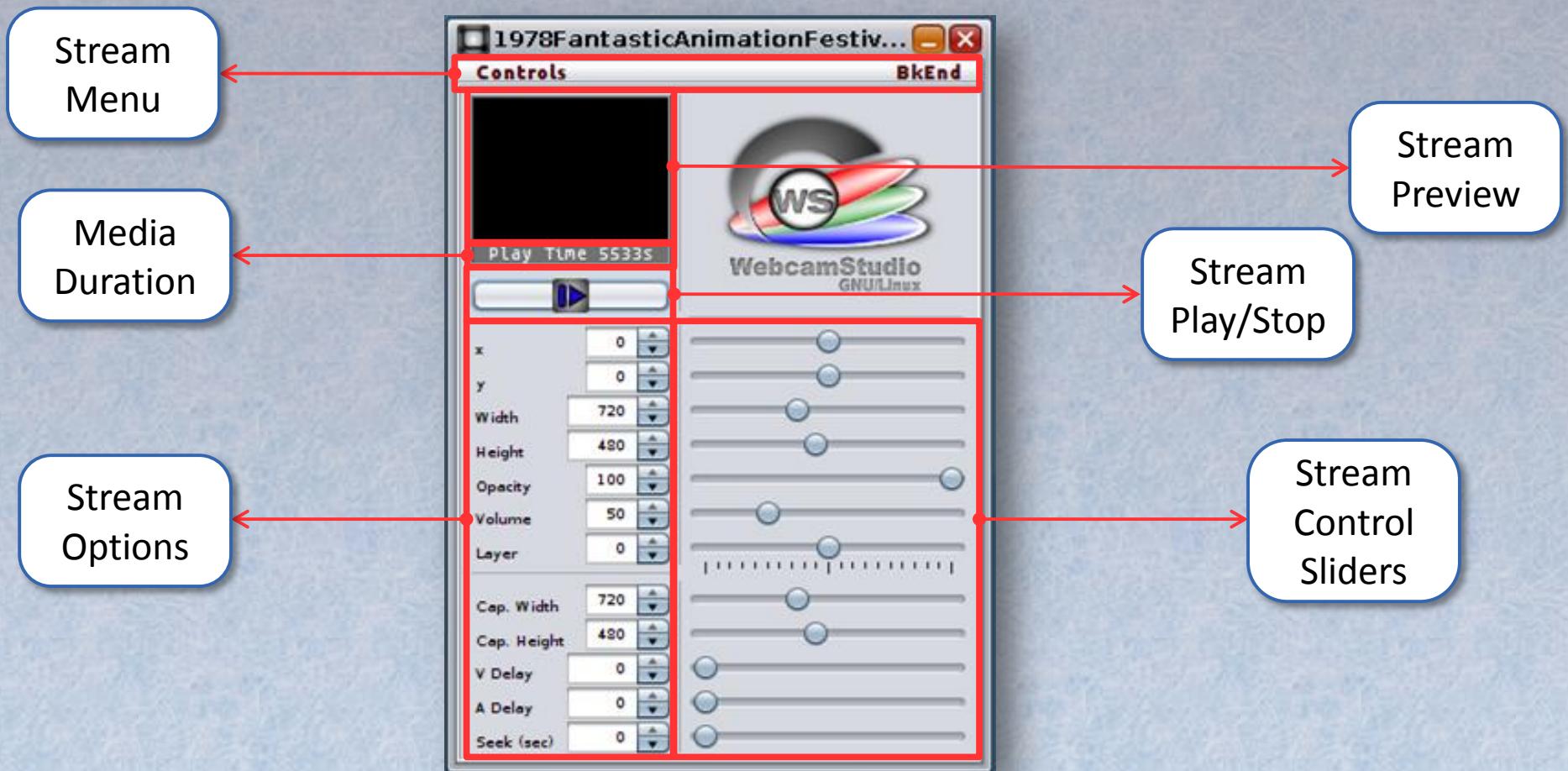
## Current Framerate

Here you can see the current Mixer FPS.

## Current Resolution

Here you can see the current Mixer Output Resolution.

# Stream-Panel



# Common Options in Stream-Panels

When you add a media to the Stream-Desktop, the correspondent Stream-Panel is created. The Stream-Panels vary depending on the type of the media added, but there are some common options:

At the top of the Stream-Panel you can see two Menus:

## Controls

You can select what options will be visible for the current Stream:

SHOW MORE OPTIONS -> Will gives you all available Options.

SHOW CONTROL SLIDERS -> Will gives you a slider control for each option.

## BKEnd

WebcamStudio can Operate with Gstreamer or Avconv BackEnds. This menu is used to switch between the twos.

## X,Y

With X and Y fields you can specify the position on the screen. The value is in Pixels.

## Width,Height

With Width and Height fields you can specify the size on the screen. The value is in Pixels.

## Opacity

With this Control you can set the % of the stream Opacity. 100% is solid.

# Common Options in Stream-Panels

## Volume

If the added media has Sound, here you can specify the Audio level.

## Layer

With Layer, you can set the Z order of the current Stream. Higher is the value, more on top will be the Stream.

## Cap. Width,Cap Height

Those filesds indicate the capture resolution for the current Stream (Not the Output One).

Usually you don't need them, and it is better to not change the default values.

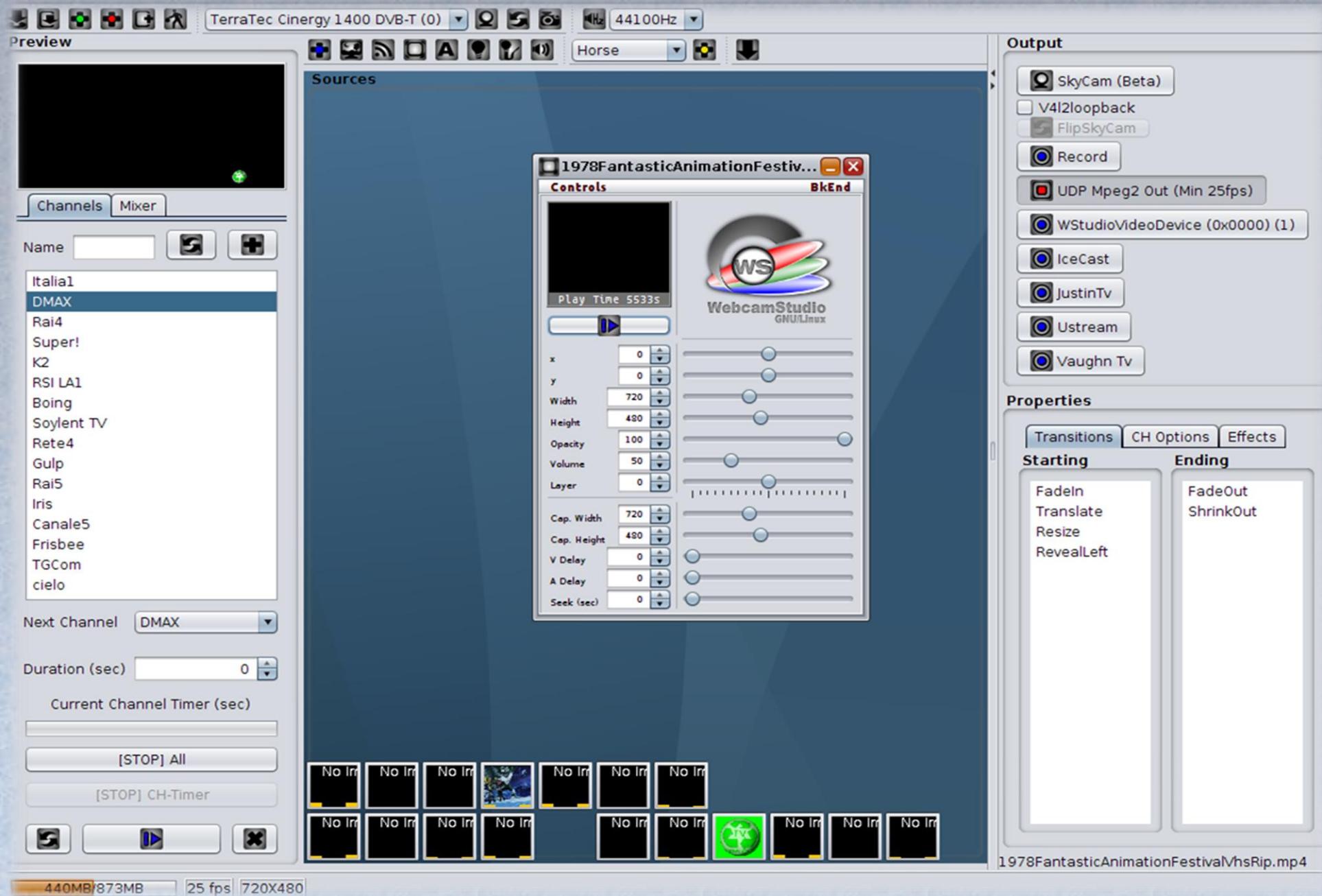
## V Delay,A Delay

Because WebcamStudio uses two separate streams for the Audio and the Video, if needed here you can set the Starting Delay for them. **Warning: Use only positive Values in Milliseconds.**

## Seek (sec)

With Seek, you can set the starting position for a Movie or a Music Stream. The Value is in Seconds. I Found Gstreamer BackEnd selection for the stream gives better results.

# Movie/Music/Picture Stream Panel



# DVB Stream Panel



# DVB Stream Panel

For DVB-T use (some channels didn't work yet ...):

WS uses the first DVB adapter=0.

From a terminal do a scan with the command (w\_scan must be installed):

```
$ w_scan -ft -X -R N -O N >> channels.conf
```

When scan has finished open the generated channels.conf and look for:

ChannelName

(ChannelName):**674000000**:INVERSION\_AUTO:BANDWIDTH\_8\_MHZ: ...  
:GUARD\_INTERVAL\_1\_8:HIERARCHY\_NONE:4512:4650:**4010**

Frequency = 674000000

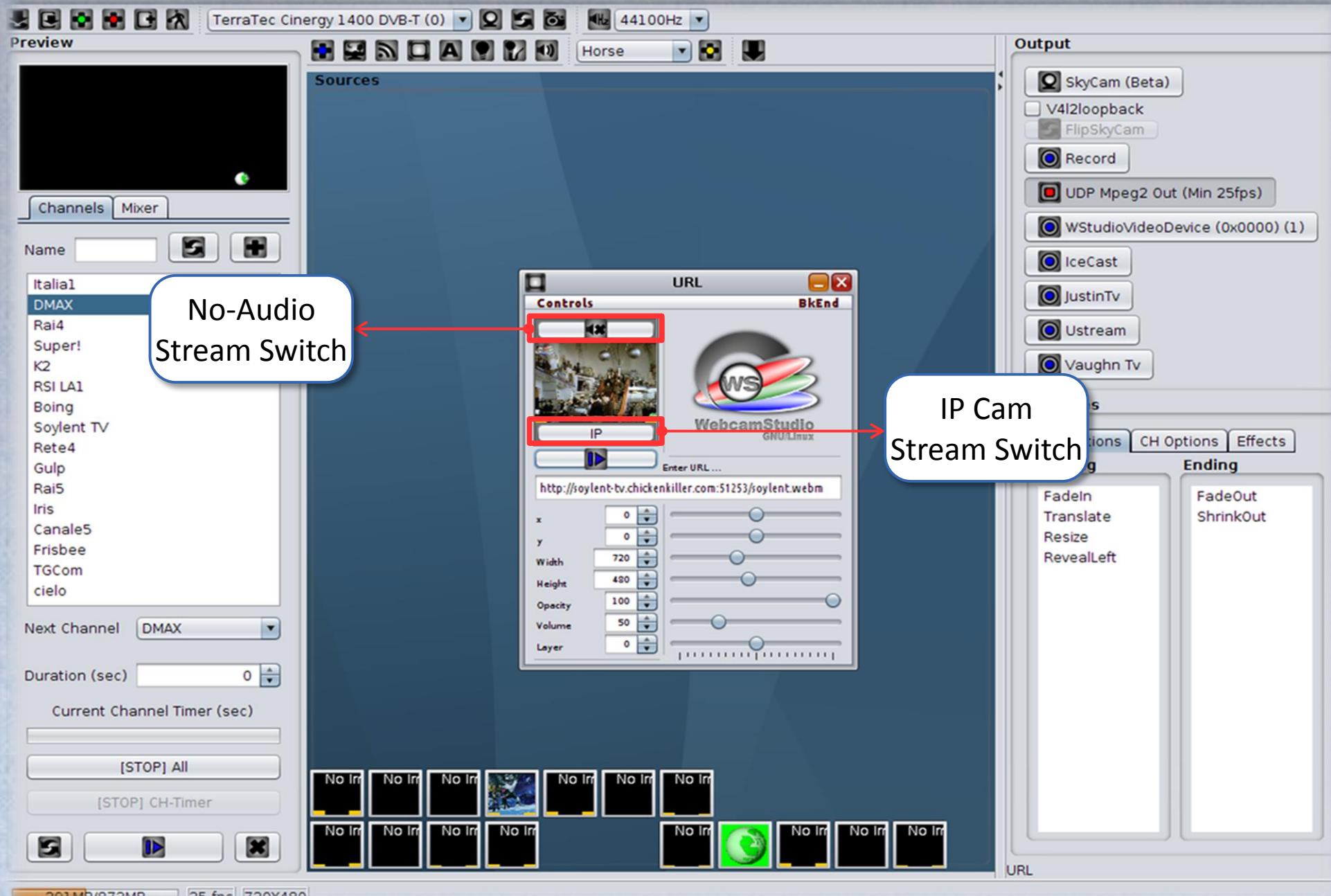
Bandwidth = 8

Program Number = 4010

Put the values on WS DVB Stream-Panel.

Hit Play Button.

# URL Stream Panel



# URL Stream Panel

With URL Stream-Panel you can use a Web video, audio or picture as a source to be played in WebcamStudio. To use it you have to copy and past the chosen URL in the “Enter URL ...” field and then push the Play button.

## No-Audio Stream Switch

If the Source video have no Audio, you have to select the “ No-Audio Stream Switch” before playing it.

## IP-Cam Stream Switch

If the Source video is an IPCam (like Axis ...) you have to select the “IP-Cam Stream Switch” before playing it. Note that at this very moment URL Stream-Panel can only play IPCam Sources in Mjpg Format.

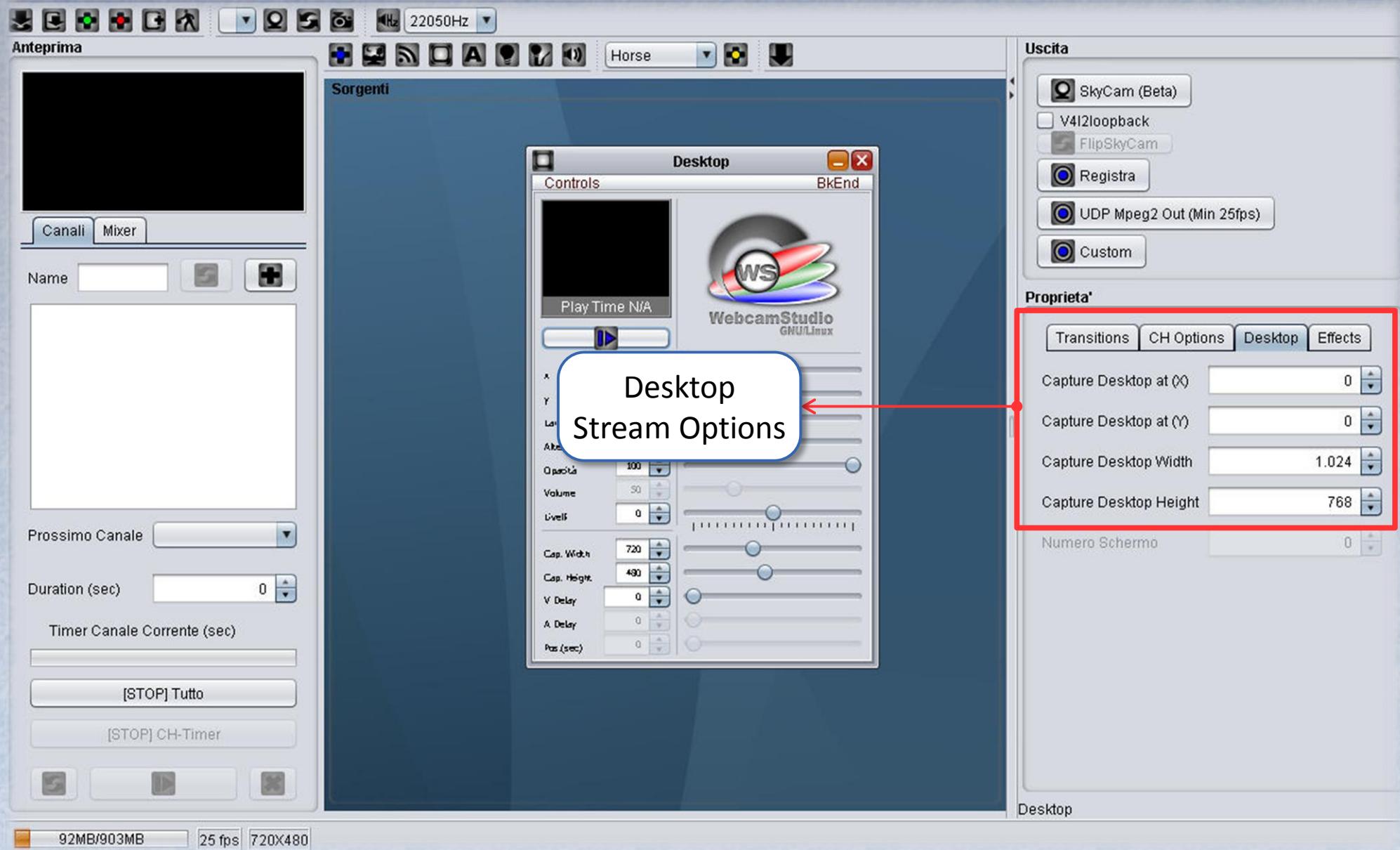
# Webcam Stream Panel

The screenshot displays the Webcam Stream Panel application interface, which is a video streaming and editing tool. The main window is divided into several sections:

- Preview:** A small video preview window showing a person's face from a UVC Camera.
- Sources:** A list of available video sources. One source, "UVC Camera {046d:0802} {2}", is selected and highlighted with a green border. It has its own control panel overlaid on the Sources list.
- Controls:** A detailed control panel for the selected camera source. It includes:
  - A thumbnail image of the camera feed.
  - Buttons for "Play" (red square) and "Stop" (grey square).
  - Text fields for "Play Time" (N/A).
  - Adjustable sliders and dropdown menus for:
    - x: 0
    - y: 0
    - Width: 720
    - Height: 480
    - Opacity: 100
    - Volume: 50
    - Layer: 0
    - Cap. Width: 720
    - Cap. Height: 480
    - V Delay: 0
    - A Delay: 0
    - Seek (sec): 0
- Output:** A list of streaming and recording destinations. The "Record" option is selected, indicated by a blue circle. Other options include:
  - SkyCam (Beta)
  - V4l2loopback
  - FlipSkyCam
  - Record
  - UDP Mpeg2 Out (Min 25fps)
  - WStudioVideoDevice (0x0000) (1)
  - IceCast
  - JustinTv
  - Ustream
  - Vaughn Tv
- Properties:** A section containing tabs for "Transitions", "CH Options", and "Effects". The "CH Options" tab is currently active.
- Block:** A panel for managing blocks, featuring a list titled "Block" and four icons for adding, removing, moving up, and moving down blocks.
- Settings:** A panel with a "Size" slider.

At the bottom of the interface, there are status indicators: "383MB/873MB", "25 fps", "720X480", and the text "UVC Camera {046d:0802} {2}".

# Desktop Stream Panel



# Desktop Stream Panel

When you select the Desktop Stream-Panel, if you look in the Source Controls you will find the Capture Options. More in detail:

## Capture Desktop At (X,Y)

Here you can specify the starting X or Y position of the Desktop Capture Function. (Top Left Corner)

## Capture Desktop (Width,Height)

Here you can specify the Desktop Capture Resolution. (Bottom Right Corner)

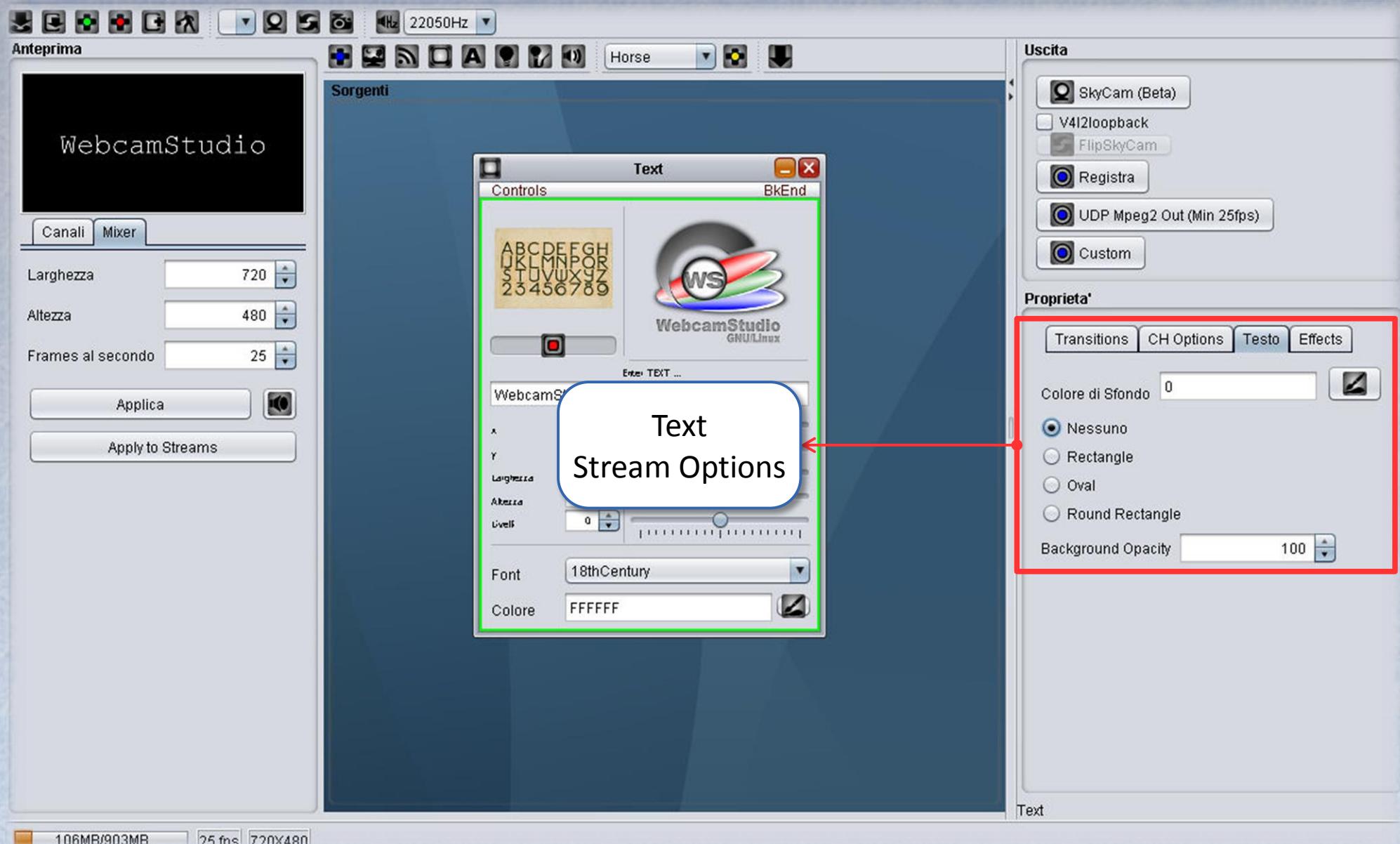
## Capture Desktop Rate

Here you can specify the Desktop Capture fps rate. A low number can lower CPU usage.

## Enable Single Window Capture

If your Stream have Gstreamer backend set up then you can use this feature to grab a single window.  
Activate this and select the window title in the Windows Capture drop-down menu.

# Text Stream-Panel



# Text Stream-Panel

Enter your text in the “Enter Text” field and push the play button. With this feature you can display a text choosing Fonts, Color, Dimensions and position. To have a Text Live Clock in your transmission simple click the “Clock” Button and start the Stream. You can also display a QR code of the written Text using the “QRCode” Button before playing.

When you select the Text Stream-Panel, if you look in the Source Controls you will find others Text Capture Options.

More in detail you can set a solid color Background for the displayed text.  
You can choose:

## BackGround Color

Here you can select The Background Color.

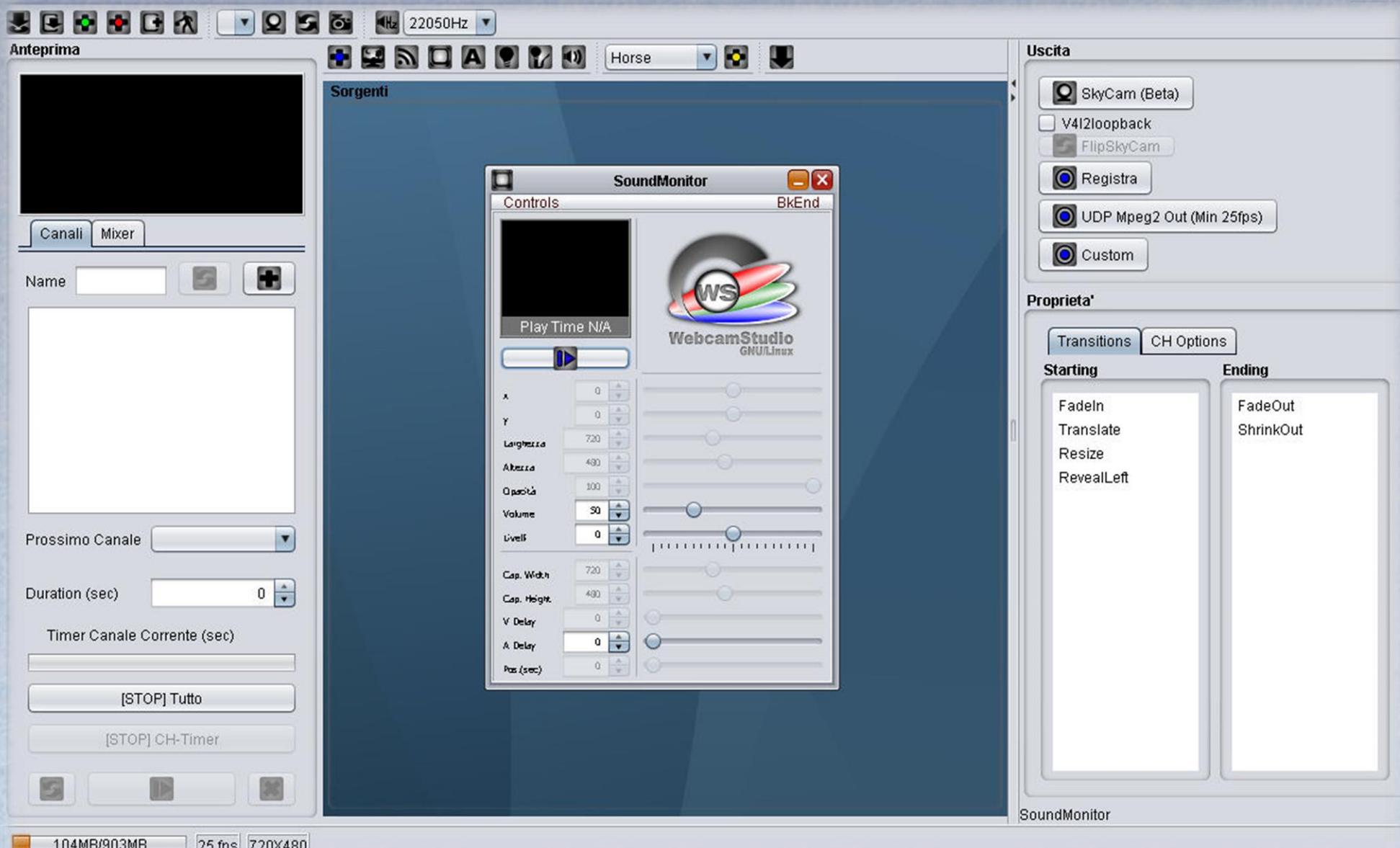
## None, Rectangle, Oval, Round Rectangle

Here you can specify the Background Shape.

## BackGround Opacity

Here you can select The Background Opacity. 100% is Solid Color.

# AudioSource Stream Panel



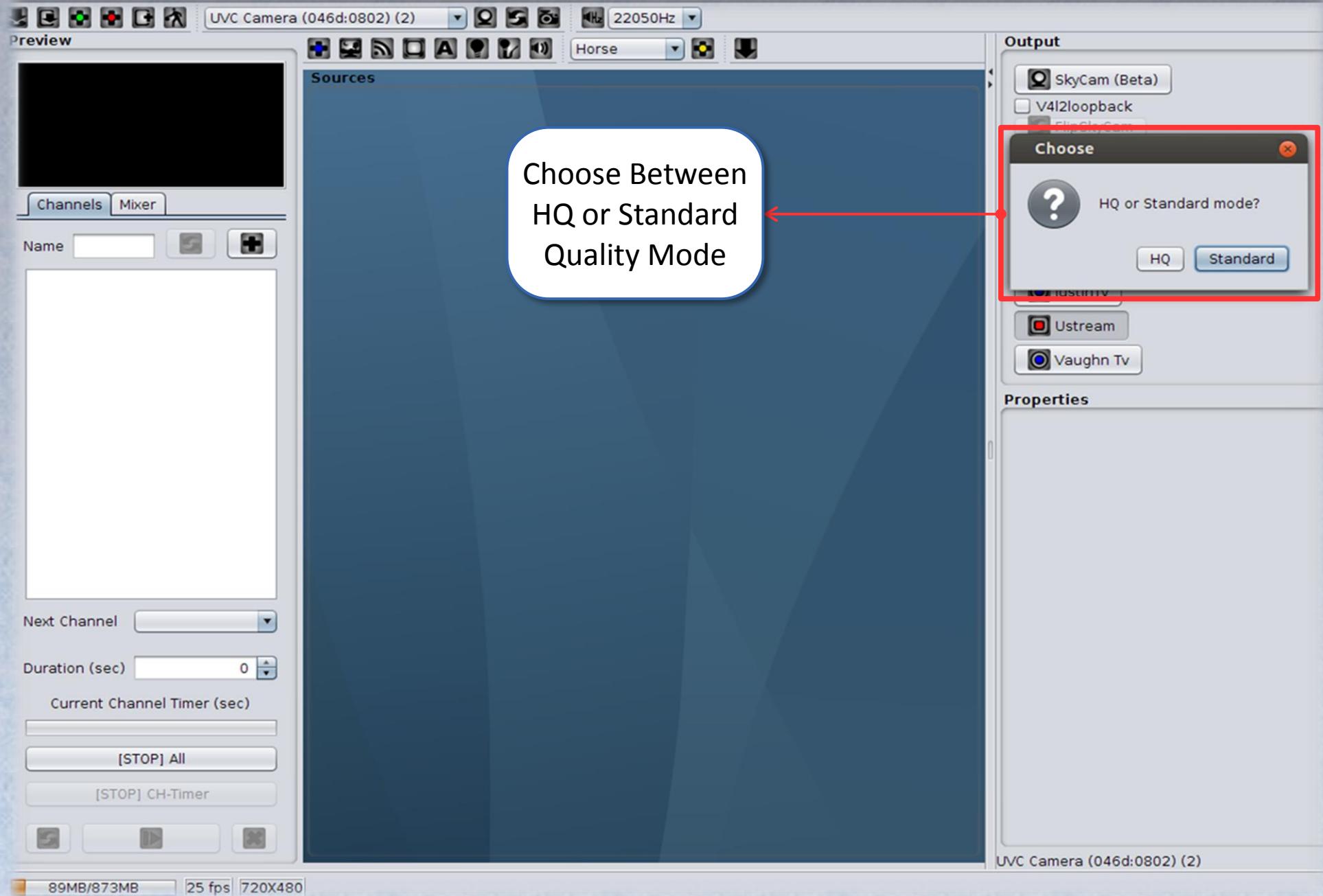
# AudioSource Stream-Panel

This one is the AudioSource Stream-Panel. You can choose an Audio input clicking the “Mini Jack” button in the top menu of the Stream-Panel. By default AudioSource displays a Wave form of the given input. This can lead to an intense CPU usage. With the little “X Monitor” pushed before the start, the video part will be disabled.

You can also change the AudioSource input using “PulseAudio Volume Control” Application.

Note: If you play the AudioSource, you will have to set the “Layer” option to a lower level than the others Stream you want to be displayed. This because AudioSource have Blank or a Wave Video (is only Audio Stream), and if it is set to the same Layer or higher, you will get a the Blank/Wave screen obscuring your transmissions.

# FME/UDP Output Quality Options



# FME Usages

You can use the FME.xml files to create a Custom Output from WebcamStudio.

Usually Streaming to Websites like Ustream, Twitch, Bambuser, VaughnTv etc ... gives the opportunity to download a preconfigured FME.xml to use with Flash Media Encoder.

You can also use FME to broadcast to a Red5, Nginx or IceCast Server.

To have it ready to work you have to Edit the xml file with your custom settings and, once saved, simply Drag'n'Drop it in the Output-Panel of WebcamStudio.

A new button will be displayed with the chosen name.

You can change the available FME settings clicking the right mouse button on the name and a pop-up menu will appear, but only when the output is not playing.

You can download FME.xml Samples from WebcamStudio Main Page:

<http://code.google.com/p/webcamstudio/downloads/list>

# FME “Ustream” Example (Edit the red ones)

```
<?xml version="1.0" encoding="UTF-8"?>
<flashmedialiveencoder_profile>
    <preset>
        <name>Ustream</name>
        <description></description>
    </preset>
    <capture>
        <video>
            <size>
                <width>640</width>
                <height>480</height>
            </size>
        </video>
    </capture>
    <encode>
        <video>
            <format>H.264</format>
            <datarate>650</datarate>
            <outputsize>640x480</outputsize>
        </video>
        <audio>
            <format>AAC</format>
            <datarate>96</datarate>
        </audio>
    </encode>
    <output>
        <rtmp>
            <url>rtmp://1xxxxxxxx.fme.ustream.tv/ustreamVideo/xxxxxxxx</url>
            <stream>xxxxxxxxSecretKeyxxxxxxxxxxxx</stream>
        </rtmp>
    </output>
</flashmedialiveencoder_profile>
```

# Channels Usages

On WebcamStudio, you can use the Channel Feature to compose a custom screen with one or more Streams mixed together, and then recall that schema when needed.

When you create a Channel, this one take a Snap-Shot of the current Streams Settings/Playing States.

For example if you load a Movie file and then you play it, using the Channel-Panel you can add a Channel in the channel list in this way:

- 1) Give the channel a name (For example “MovieStart”)
- 2) Click on the [+] button

You will see your new channel displayed in the channel list.

After that stop your Movie Stream and add a new channel (For example “MovieStop”) in the same way.

Now select your “MovieStart” channel and click on the “Apply Channel” button, you will see that the associated stream begins playing. Naturally if you select “MovieStop” and click on the “Apply Channel” button, you will see that the associated stream will stop.

# Channels Usages

In this way you can create all possible configurations involving any kind of streams, and use that schema later in your transmission invoking the correspondent channel.

When you have done a channel configuration, you can always Update that schema (Stopping a stream, adding a playing one, change an already playing Stream settings etc ...) making the desired change, select the correspondent channel and then using the “Update Channel” [↑↓] Button at the left bottom of ChannelPanel.

If you have to update all channels with a specific Stream, for example, in playing state all that you have to do is select it, go in the “CH Options” Tab in the “Source Controls” and press “Update in all Channels” button.

# Channels Transition Usages

Channels Transitions works in channels and are applied on Streams. To enable them you have to add at least one channel. Take a Look at the picture at Chapter 7.

When you select a Stream-Panel, looking in the Source-Controls you can choose a transition from the “Transitions” tab.

Example:

- 1) Add a Video file.
- 2) Select a Starting and an Ending transition from the Source Controls “Properties”.
  - 3) Play the Stream and add a Channel Named “Movie1-T”.

Now select your “Movie1-T” channel and click the “Apply Channel” button.

Stream is already playing and you will see the transitions in action in the preview window every time you apply the channel.

Now go in the Source-Controls under “Transitions” and select a different Starting and Ending Transitions.

Before re-click the “Apply Channel” button (to see what the new choice does), click on the “Update Channel” [ $\uparrow\downarrow$ ] button to tell WS that now the transition for that stream in that channel are changed.

# Channels Transition Usages

To have working transition switching from a channel to another, be sure that all the Streams have at least one starting and one ending transition selected in every channels.

Here there is an example (Create a new Studio first):

- 1) Add two Video files. (Movie1 and Movie2)
  - 2) Play Movie1.
  - 3) Add a Channel named “Movie1-T”
  - 4) Stop Movie1 and play Movie2.
  - 5) Add a channel named “Movie2-T”
- 6) Go in the Source-Controls Properties, select a Starting and an Ending Transition and click on the  $[\uparrow\downarrow]$  “Apply Selected Transition to all channels” button.
- 7) Now if you select “Movie1-T” and apply it, you will see the selected starting transition for Movie1 and if you select “Movie2-T” channel and apply it, you will see the selected ending transition for Movie1 and the selected starting transition for Movie2.

# WebcamStudio Video Tutorials And Others Useful Stuff ...

You can also see my YouTube Channel for some WebcamStudio 0.6x Samples/Tutorials At:

[http://www.youtube.com/channel/UCOTBw7\\_WjX-Fe1XXAlv7HGA/videos](http://www.youtube.com/channel/UCOTBw7_WjX-Fe1XXAlv7HGA/videos)

You can ask for any question related to WebcamStudio in the G+ Community Here:

<https://plus.google.com/communities/110329269823088092206#communities/11032926982308809220>

6

WebcamStudio Main Page:

<http://code.google.com/p/webcamstudio>

# Credits

Thanks to Patrick Balleux for this Great Program:

<http://www.ws4gl.org>    <http://hotcoding.crombz.com>

Thanks to **PhobosK** for all the hard work he make for WebcamStudio Web Presence, PPAs archive and overall organization.

Thanks to V4l2loopback Team:

<https://github.com/umlaeute/v4l2loopback>

# Credits

Thanks To G+ Community WebcamStudio Reloaded:

j c-chord ; César Medrano Mariscal ; Zach McCullough ; Enrique Avila ; Joshua leeCharles Maddox ; Uche Okonkwo ; Erikas Aubade ; Toby Leheup ; Robert Belcher ; T Anthony H Frisby ; Chuck Daley ; Andrew Silver ; Patrick Bulteel ; xaGe ; Micha el ; RJVisser ; Eduardo Perez ; Apollo FM ; Angelocracy Xue ; Francisco Pedro ; Kevin Lausen ; Charles Kunkle Jr. ; BlogoMedia Best ; Ed Bespyatkin ; Nicola Spreafico ; Ronnie Tucker

Thanks to all the people I forgot to mention here.

... And also thanks to **everyone** who use WebcamStudio.

Have a nice day :)