Genki Shadowcast and USB HDMI Video Capture Tips and Tricks (v1.1)(Windows 10)

This Guide is intended to help setting up „MPV“ (mpv.io) and to reduce Video Latency on Windows10. Also how to enable the recording audio device with a batch to mitigate many mouse clicks and menu surfing. I tested it with a cheap „USB2.0 HDMI Video Capture“ device, but this document should be also applicable for Genki's Shadowcast. Hopefully i get mine soon.

Audio Method 1:

Changing Audio Recoding Device to „Listen“ to get Audio:

First you will need the Free Tool „Sound Volume View“ from Nirsoft.

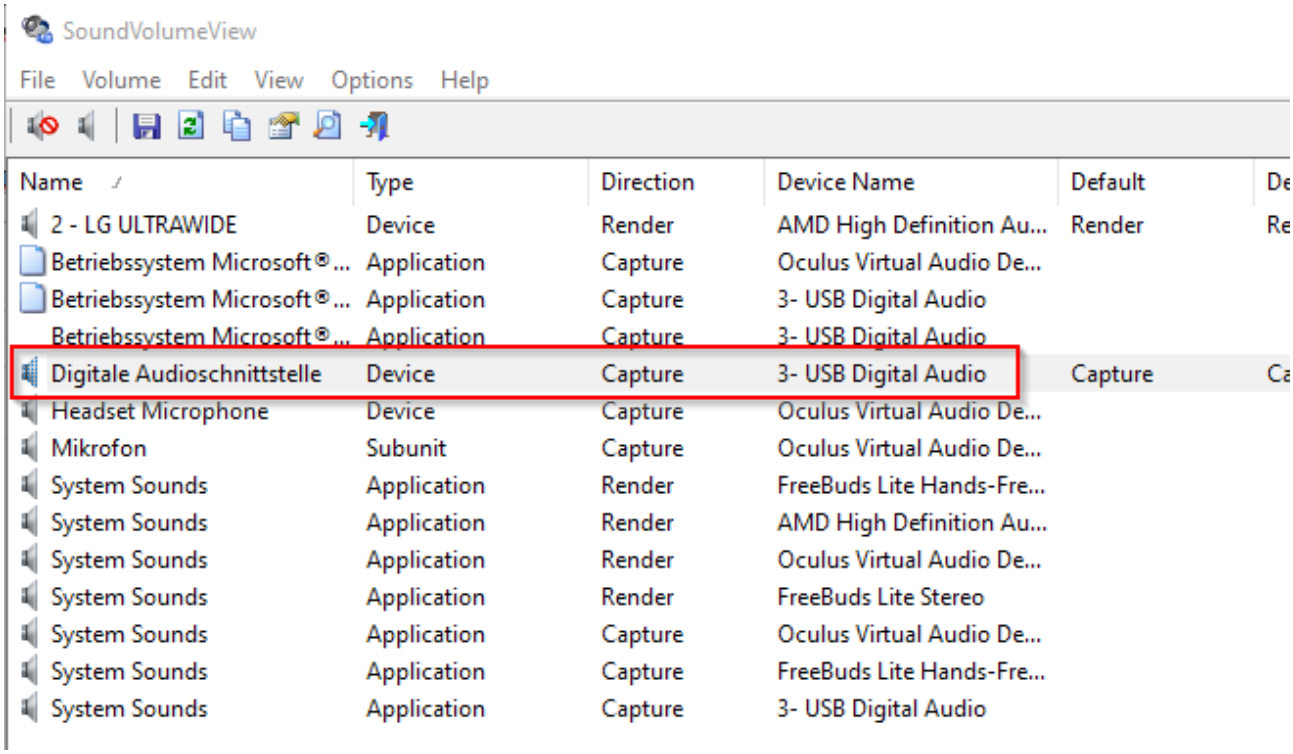
Direct download links:

https://www.nirsoft.net/utils/soundvolumeview-x64.zip

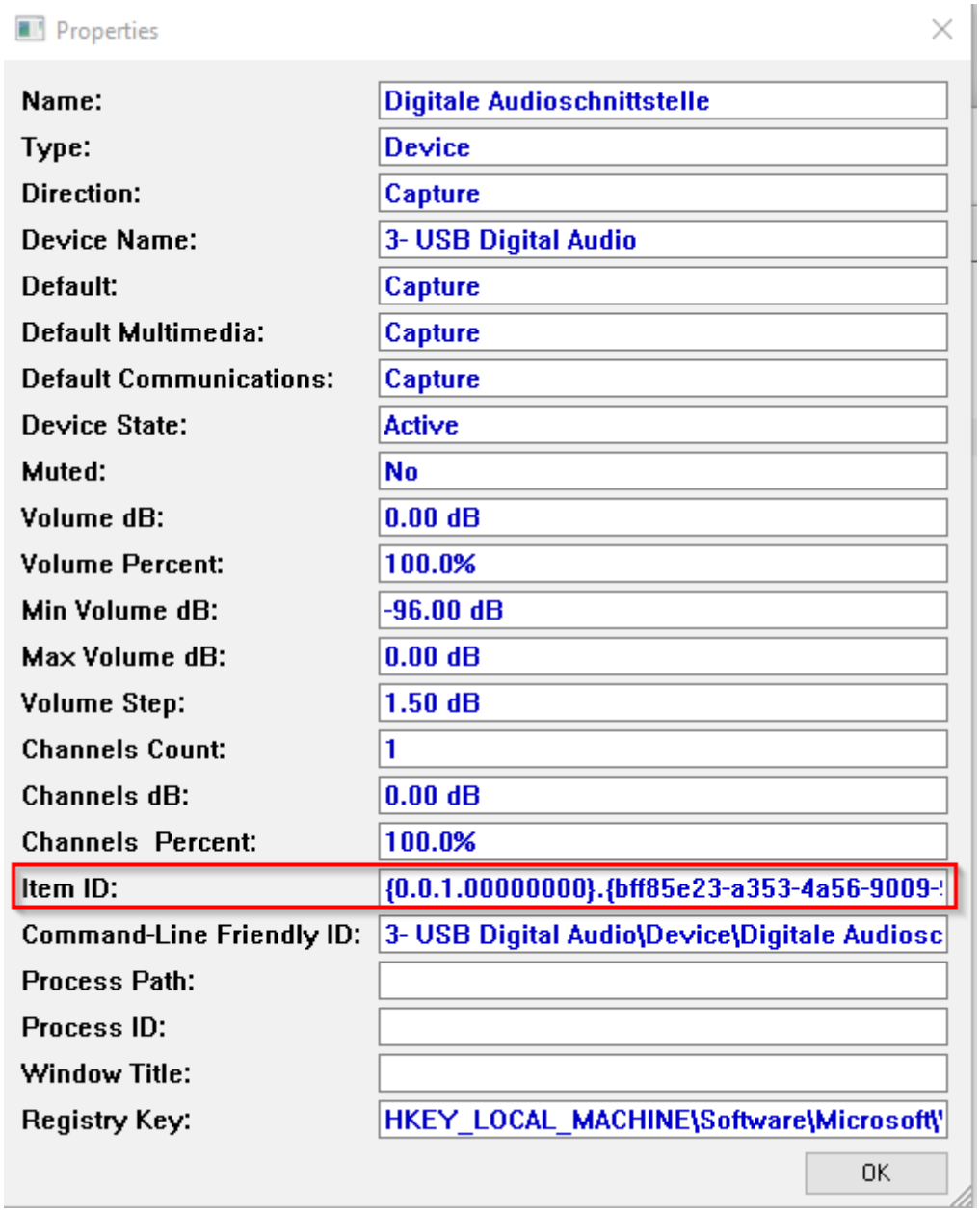
https://www.nirsoft.net/utils/soundvolumeview.zip

Choosing the right Recoding device:

In this case it is „USB Digital Audio“ the digital audio interface



Next, double click on the device and copy „Item ID“. In this case „{0.0.1.00000000}.{bff85e23-a353-4a56-9009-9fd143dce793}“. For your set-up, please copy your „Item ID“.



Enabling recording device to „Listen“:

Now, open Command Line „cmd“ in your „Sound Volume View“ Folder.

With following command you enable your recoding device to „Listen“ and enables the sound from your captured Device.

SoundVolumeView.exe /SetListenToThisDevice "{0.0.1.00000000}.{bff85e23-a353-4a56-9009-9fd143dce793}" 1

Disabling:

SoundVolumeView.exe /SetListenToThisDevice "{0.0.1.00000000}.{bff85e23-a353-4a56-9009-9fd143dce793}" 0

You can put these lines in two different batch files. Or put the enabling one in batch files that also start you mpv for a „seamless“ experience.

Attention:

You can also use the Device name without the number and hiphen:

In this example you can use „USB Digital Audio“ instead of „3- USB Digital Audio“.

SoundVolumeView.exe /SetListenToThisDevice "USB Digital Audio" 1

This works if it is the only device with this name. It has the advantage to select the correct device, in case you change USB port and Windows decides to make „4- USB Digital Audio“, instead of prior „3- USB Digital Audio“.

With method one, you seem to have only Mono Sound played on Stero speakers. It seems that Windows does only a downmix. For Stereo Sound look for Audio Method 2.

Audio Method 2:

Using „mono-to-stereo“ for devices with „MS2109“ chipset.

https://github.com/ToadKing/mono-to-stereo/releases/latest

Find your divece:

mono-to-stereo.exe --list-devices

Look in the „Active capture endpoints“ section for your device:

In this case it is „Digitale Audioschnittstelle (3- USB Digital Audio)“

Use your recording device:

mono-to-stereo.exe --in-device "Digitale Audioschnittstelle (3- USB Digital Audio)"

Attention:

If your audio channels are swapped, the author mentions to use also „--no-skip-first-sample“ in your command line.

See: https://github.com/ToadKing/mono-to-stereo/issues/4

With Audio Method 2 you can’t use a short name like „USB Audio device“, but it seems the sound is rendered in Stereo. I could confirm this by using a Laptop as ditigal Input and played Left and Right output separately.

MPV standard settings from Genki Facebook Group:
(Thx to Daniel Houghtaling) (https://discord.gg/7Wa4AjGjQD)
(https://www.reddit.com/r/genkilab)

mpv.exe av://dshow:video="ShadowCast" --profile=low-latency --untimed

or (in my case the USB 2.0 HDMI Video Capture device“)

mpv.exe av://dshow:video="USB Video" --profile=low-latency --untimed

To use these setting, you make a shortcut for you MPV executable and the edit it’s properties and put it „av://dshow:video="USB Video" --profile=low-latency --untimed“ in „Target“ behind mpv.exe.

Config options that helped me to reduce Video latency:

(These helped on my System set-up, your mileage may vary)

In the subfolder „mpv“ there is „mpv.conf“, that you can manually edit.

High quality video rendering for fast computer.

deband=yes

fullscreen=yes

profile=gpu-hq

fps=60

opengl-glfinish=yes

opengl-swapinterval=0

framedrop=no

speed=1.01

How i tested Video latency?

Is used the 240p Test Suite for SNES on my „MiSTer FPGA“ Console and a 2.4Ghz Gamepad.

I chose „Manual Lag Test“ and made 3 - 4 retries each.
With „standard“ settings my average lag was 7-8 frames.

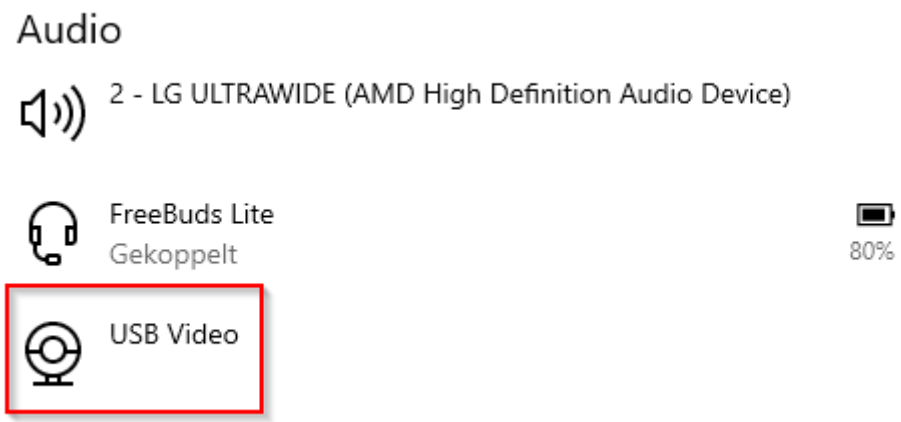
With above setting my average lag was 4-5 frames.

Like mentioned above your mileage may vary on used system-setup and console. With „deband=no“ you could also reduce lag, but i had screen tearing, so i prefer „deband=yes“.

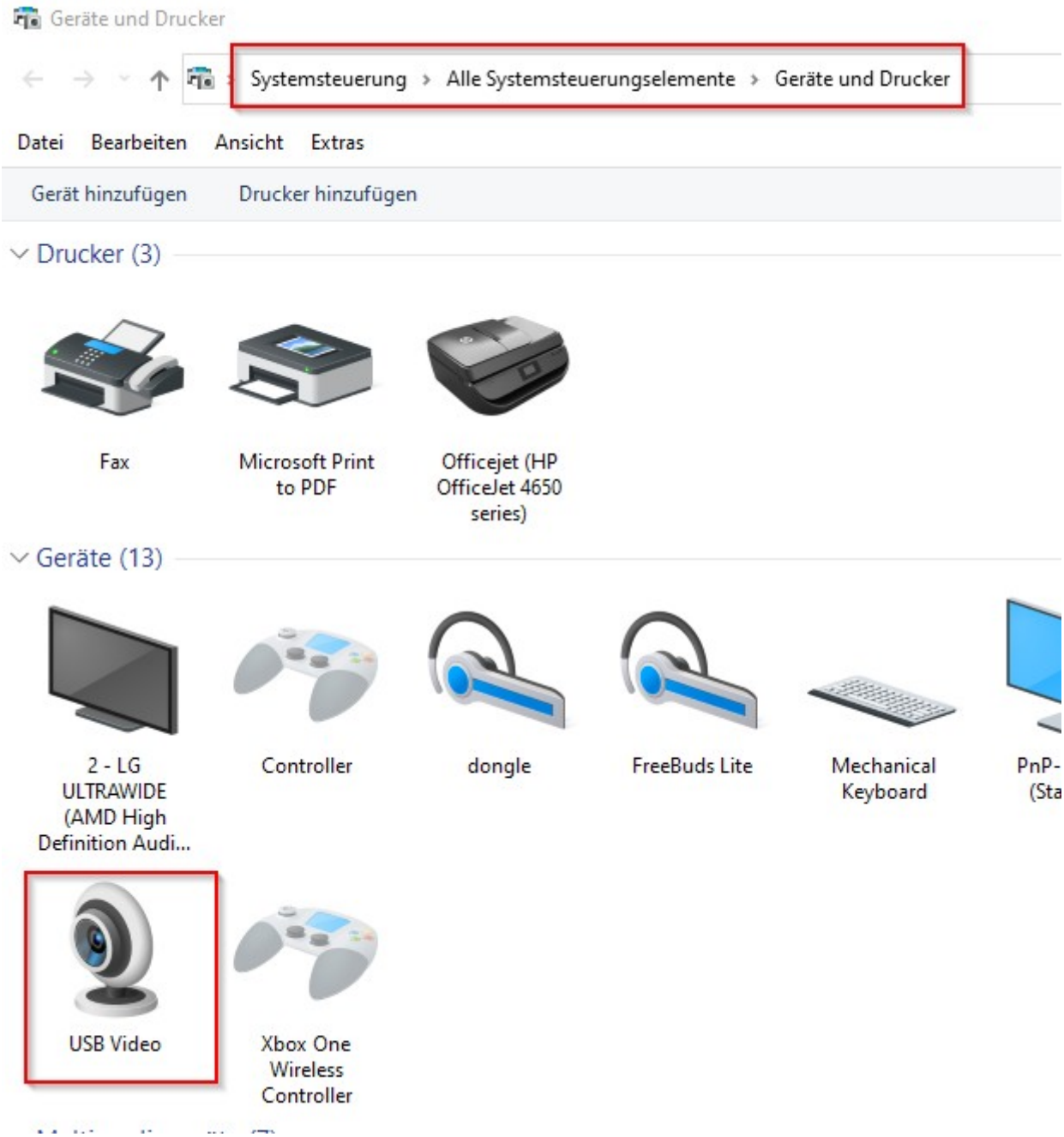
This is not a scientific approach, but easy to realize for me right now.

How do i find the Name for my USB Video Capture device?

You got to your System Settings and look under devices.



Or:


Geräte und Drucker
Systemsteuerung › Alle Systemsteuerungselemente › Geräte und Drucker
Datei Bearbeiten Ansicht Extras
Gerät hinzufügen Drucker hinzufügen
Drucker (3)
Fax
Microsoft Print to PDF
Officejet (HP OfficeJet 4650 series)
Geräte (13)
2 - LG ULTRAWIDE (AMD High Definition Audi...
Controller
dongle
FreeBuds Lite
Mechanical Keyboard
PnP-
(Sta
USB Video
Xbox One Wireless Controller

MPV example conf:

https://github.com/mpv-player/mpv/blob/master/etc/mpv.conf

my Profile example:

Shortcut: C:\Users\UserName\Desktop\mpv\mpv.exe av://dshow:video="USB Video" --profile=low-latency --untimed --profile=USBVideoCapture

mpv.conf:

High quality video rendering for fast computer.

profile=gpu-hq

[ShadowCast]

deband=yes

fullscreen=yes

fps=60

opengl-glfinish=yes

opengl-swapinterval=0

framedrop=no

speed=1.01

[USBVideoCapture]

deband=yes

fullscreen=yes

fps=60

opengl-glfinish=yes

opengl-swapinterval=0

framedrop=no

speed=1.01

Batch File examples:

For ease of use i put „SoundVolumeView.exe“ and „mono-to-stereo.exe“in the root of my MPV installation folder. For this example i will use „mono-to-stereo.exe“

Starting batch file silently/minimized:

```
@echo off
START /MIN CMD.EXE /C USBVideo.bat
mono-to-stereo.exe --in-device "Digitale Audioschnittstelle (3- USB Digital Audio)"
exit
```

Starting** USBVideo.bat (**MPV and taskkill)

```
@echo off
REM set scriptFolder=%~dp0
REM Start MPV with Profile
mpv.exe av://dshow:video="USB Video" --profile=low-latency --untimed --profile=USBVideoCapture --no-audio

REM Stop mono-to-stereo process when exiting MPV Window
taskkill /F /im mono-to-stereo.exe
exit
```

Using MPV on Linux:

(tested under PopOS)

```
mpv --demuxer-lavf-format=video4linux2 --demuxer-lavf-o-set=input_format=mjpeg av://v4l2:/dev/video2 --profile=low-latency --untimed –profile=USBVideoCapture
```

For sound: pactl load-module module-loopback

Stopping sound: pactl unload-module module-loopback

Final thoughts:

Which Audio methods should i use? It depends, „SoundVolumeView“ for ease of use, „mono-to-stere“ for real Stereo sound.

These are examples i use. Probably there are more elegant code solutions and i hope users can still benefit. For now, have fun fellow Gamers.

Versions:

1.0 - Base document

1.1 - Corrections and added Audio Method 2: mono-to-stereo

1.2 - Added Linux cli options