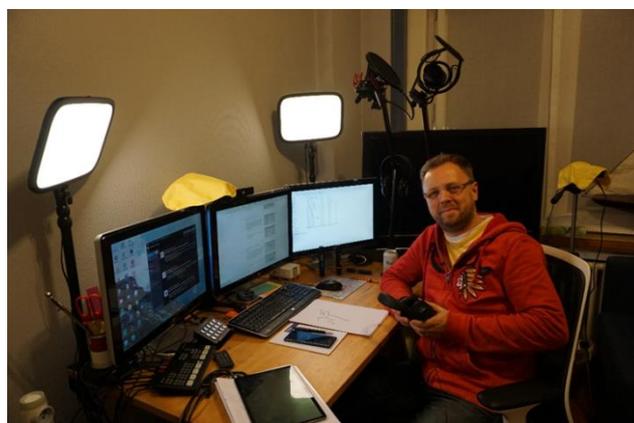


# Visualization on the internet.

## Technical tips and tricks for your studio

Disclaimer: No, I am not sponsored by any of the mentioned brands. I tried a lot, spend even more and eventually picked what worked the best for me. (I like quality)

Rudy



Example: filming in a large mirror is a bad tip if you add tekst.

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## Internet connection

### Common Pitfall:

- using Wi-Fi
- other housemates use VPN or streaming services like YouTube or Netflix during your performance.

### Tips:

- use a wired connection: UTP Cable at least Cat6
- Ask housemates to stay of streaming during you performance
- Throughput: check with speedtest.net or upgrade even temporarily if necessary



## Lighting

### Common Pitfall:

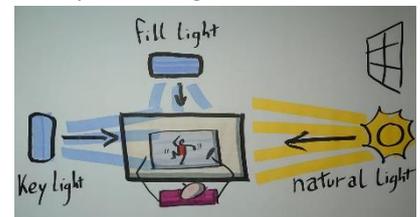
- Dark spots, grey paper, shadows and reflections
- No extra lighting in use

### Tips:

- Compensate for the natural light falling in from windows: use extra lighting!
- Key lights or soft boxes: focus your light on the far end of the paper.
- Led-panel Key lights can be adjusted for your visualisation or yourself, presenting, ...
- Test your lighting by talking a picture and evaluate. On several times of the day. Watch out for dark spots or shadows.

### Preferable adjustable lights:

- colour at least 4800K (arctic blue) or more for radiant colours
- intensity at least 2500 lumen



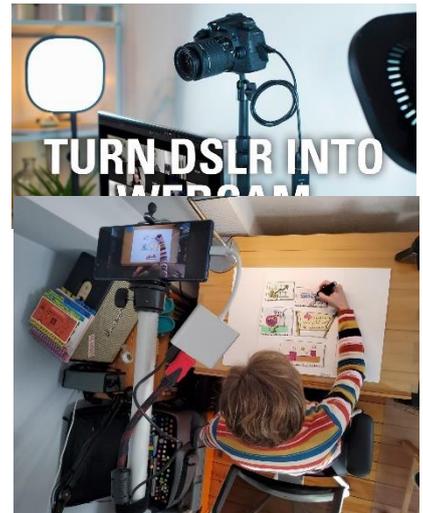
## Camera

### Common Pitfall:

- Using a mediocre webcam or (even worse) a build in webcam
- Camera is unable to set its focus sharp on the drawing
- Mirrored video
- Strange camera angle
- Wiggling camera

### Tips:

- Preferable use a photo camera on an overhead stand: set to 'live view', electric current fake battery pack, hack for more than 30 minutes, the right USB of HDMI cable (long enough)
- Use your smartphone and install Droidcam or EPCcam for USB or Open Studio for HDMI
- Fix your focus on the drawing instead of autofocus
- Use a camera for the drawing/Whiteboard/flip over and a different camera for yourself
- Use a studio arm for overhead shot of your drawing desk (check weight or add weight)
- Check the different treads and buy a convertor if needed (in Dutch: schroefdraadgrote) ¼ inch (camera) 3/8 inch of 5/8 inch microphone standards
- Use a Camera stand ball head for the perfect position of your camera
- filming in a large mirror is a bad tip if you add tekst



## Drawing Desk

### Common Pitfall:

- Poor lighting results in grey areas on the paper
- Surface reflects the light (hard surface or glass can work like a mirror)
- Too much distracting stuff around your working area

### Tips:

- Cover the surface so it doesn't reflect the light
- Use soft boxes or key lights (see later)
- Clean desk policy!
- Take a picture from the standpoint of the camera and see how it looks like.



## Flip over

### Common Pitfall:

- Poor lighting, you often stand in in your own light
- Mediocre camera position: flip over is only partially visible because flip overs are portrait, cameras are landscape
- Microphone is too far away to understand you

### Tips:

- Use a fill light from above
- Can you position your paper in landscape?
- Position you mic near the flip or use a Lavalier

## Whiteboard

### Common Pitfall:

- Reflecting light, shadows, you often stand in in your own light
- Microphone sounds hollow due to reflection on hard surface

### Tips:

- Use a soft fill light diagonal from above, see that it doesn't reflect
- Most whiteboards are landscape, use it preferable like this
- Use a Lavalier microphone or use sound reflecting panels around the whiteboard
- Use professional sound reflecting panels near the whiteboard



## Streaming or meeting software

### Common Pitfall:

- Not using the maximum video quality output
- Not pinned or spotlighted on your video feed

### Tips:

- Use Full Screen: F11 (Windows) or Command+Shift+F (Apple)
- Ask your participants to use full screen
- Use your maximum video quality output
  - In Zoom: select HD, ask the people to set to 'speaker view'
  - In Google Meet: select highest (720p) output quality
  - In other software: check to select the maximum output quality (not available in MS Teams 2020)
- If you have a second computer: log in twice, one for your face, one for your visualisations
- if you want to show your work: Pin or spotlight your visualisations (or ask the attendees to do so when you have no host rights)



## Microphone

### Common Pitfall:

- hollow tinny sound from a distance
- Muffled sound when you bend forward, faced down for drawing
- Heavy breathing when you position a headset in your air flow

### Tips:

- Stuff the room with pillows, blankets, curtains, a couch, or use professional sound reflecting panels
- Avoid talking towards hard surfaces (computer screen, your desk surface)
- Use an external condenser microphone:

- o USB Large (25mm) diaphragm condenser (80€)
- o XLR Large (25mm) diaphragm condenser studio microphone (250€)
- Use a pop filter when you have your mic up close
- Use a Lavalier microphone
- Or use a Studio arm and position the microphone upside down next to the camera above your drawing

## The modern professional touch

### Work with multiple camera's:

- Use OBS Studio for picture in picture modus with multiple camera's (freeware) Use the Virtual Camera Plug-In
- Use a HDMI video switcher like the BlackMagic design Atem Mini for professional camera quality and transitions (300€)

### Promote yourself with Lower thirds

- Use H2R software (freeware) heretorecord.com

### Use soft background music

- Make sure it is legal to use (No Copyright Music) streambeats.com (freeware)
- Download and install VLC Media player (freeware) put it on repeat (lower right corner)
- Select multiple tracks, right click, Add to VLC playlist, adjust the volume
- Make sure your streaming tool transfers the audio (OBS, Twitch, Zoom: Share screen, Check Share computer sound, Advanced, music or computer sound only)

### Nice to have

- Multiple screens (at least two) set Zoom for use with multiple screens
- Stream deck with a long USB extension cable to place it near you and control camera's, microphones, audio, recording, software, ... with macro's
- Chroma Key: watch out with multiple camera's, when you are drawing all the green will become transparent (make a macro to shut it off easily or let the chroma disappear if you do a transition to another camera)