

# Angel Introduction: Camera and Video Mixer

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October 18, 2025

C3VOC



<https://github.com/voc/engelschulung>

## General

- We will stream, record and publish nearly all talks with your help
- You can operate the cameras and video mixer
- At do-not-record talks we also need angels
- We (people from c3voc) will be there to help
- The live stream video signal will also be the final recording
- We aim for consistent quality, but everybody make mistakes – don't blame yourself!

# Angeltypes

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# Angeltypes

- A/V Angels:
  - Camera Angels
  - Video Mixer Angels
  - Audio Mixer Angels
- A/V Technician
- C3VOC Crew

## A/V Angel: Role Camera

- One camera angel per camera in each lecture hall
- Operates the cameras in the lecture halls
- Maintains good camera settings

## A/V Angel: Role Video Mixer

- One person per lecture hall
- Operates the video mixer to produce an interesting video
  - Switches between cameras and slides
  - Composes pictures with multiple sources
  - You decide, which sources to show
- Mixed video feed is used for both, live-stream and the recordings
- You might get assistance by a director on challenging talks

## A/V Angel: Role Audio Mixer

- This might also be the task of the video mixing angel
- Mute and un-mute microphones when they are used/ not used
- Change the amplification for individual microphones
- Check the audio level (loudness) for stream

## C3VOC Crew

- 2nd to n-th level support in the lecture halls.
- Responsible for keeping stuff working
- Familiar with all equipment in use
- Able to fix (nearly) all the issues
- Reachable via phone/ DECT

## A/V Technician

- Direct support for you in the lecture hall
- Makes sure, that speaker laptop is connected
- Responsible for the speaker's headset microphone
- Communication gateway to the Stage Managers and external crew
- Your **first contact for any technical issues** in the lecture hall
- Shifts usually last four hours

## Basics

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## Closeup Shot

- Show the head and upper part of the body
- Leave the width of one hand above the head
- Eyes should be close to the upper third line

## Closeup Shot: Good Example



**Figure 1:** Good closeup shot

# Closeup Shot: Good Example



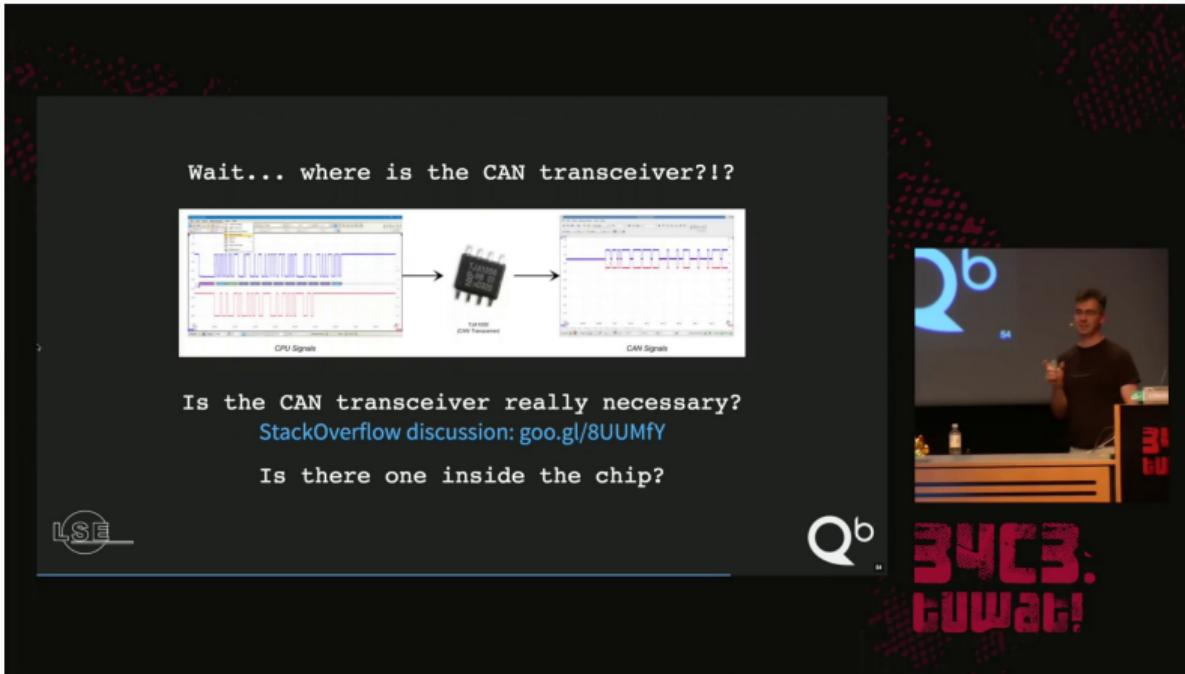
**Figure 2:** Good closeup in Lecture Mode

## Closeup Shot: Bad Example



**Figure 3:** Half a head - not good

# Closeup Shot: Bad Example



**Figure 4:** Too far out for a good Lecture Mode image

## Medium Shot: Good 1



**Figure 5:** One person, the lectern and some context

## Medium Shot: Good 2



**Figure 6:** Two persons on stage

## Overview

- Shows the complete stage and the people on it
- Heads of the crowd are OK, if it's dark enough
- Don't use this camera to show the slides - use lecture mode instead
- Locked off, do not move.

## Wide Shot: Good Example



## Usual Talk Timeline

- Please be on time when your shift starts
- Get to know your fellow angels, check the camera and mixer
- Talk starts with an introduction by the herald
- Speaker starts talk
- Q&A session
- Talk ends with "thank you" and applause
- Hand over to the next angels

## Camera Hardware

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# Hardware Camera Controls Sony PXW-Z200



**Figure 7:** Sony Cam

Cameras are in manual mode because of difficult lighting situation.

**Left Ring/red** Focus - control sharpness of the image.

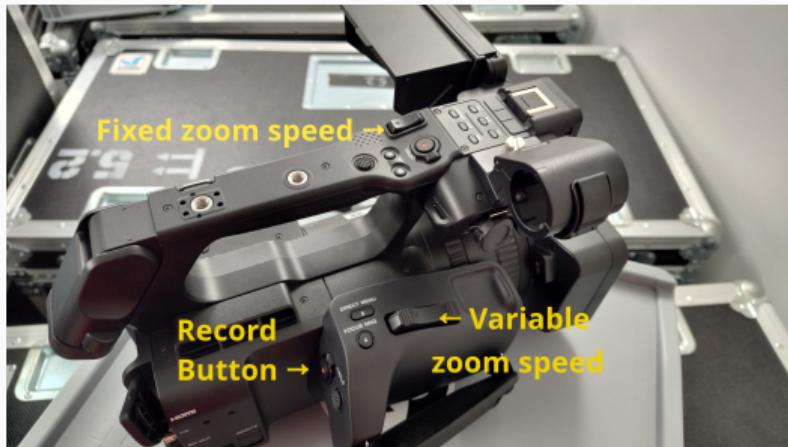
**MF/AF Selector** Auto Focus - always on.

**Middle Ring/green** Zoom - vary the focal length.

**Right Ring/blue** Iris - adjust according to lighting situation.

If there is anything wrong, contact C3VOC helpdesk.

## Zoom Control Sony



- For smooth zoom use the zoom buttons.
- Gentle touch ⇒ slow zoom

**Figure 8:** Sony Cam

# Display Indicators Sony



**Figure 9:** Sony Display Indicators

**Focal Indicator** Autofocus with face tracking is awesome!

**Rec Indicator** The recording must always run, even during the break.

**Remaining Time** More minutes remaining than the length of the next talk.

## Alert

Alert the A/V-Technician if something's wrong.

# Tripod



**Figure 10:** Tripod

- Should be level - check the water bubble.
- Variable brakes - can be adjusted to your needs.
- Tilt axis should be balanced, so that the camera doesn't tilt up or down on its own.
- Pan axis is needed all of the time. Set it so you can do smooth pans all over the stage.

## Alert

Alert the A/V-Technician if something's wrong or misplaced.

## SD-Card Recording

- Two SD-Cards in every Camera
- Backup Recording
- Turn on Recording before first shift in the morning -> Red Dot somewhere in the Display.
- Control Recording Time remaining.

### Alert

Alert the A/V-Technician if something's wrong or not running.

## Video Mixer Tools

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# Voctomix2 - Overview

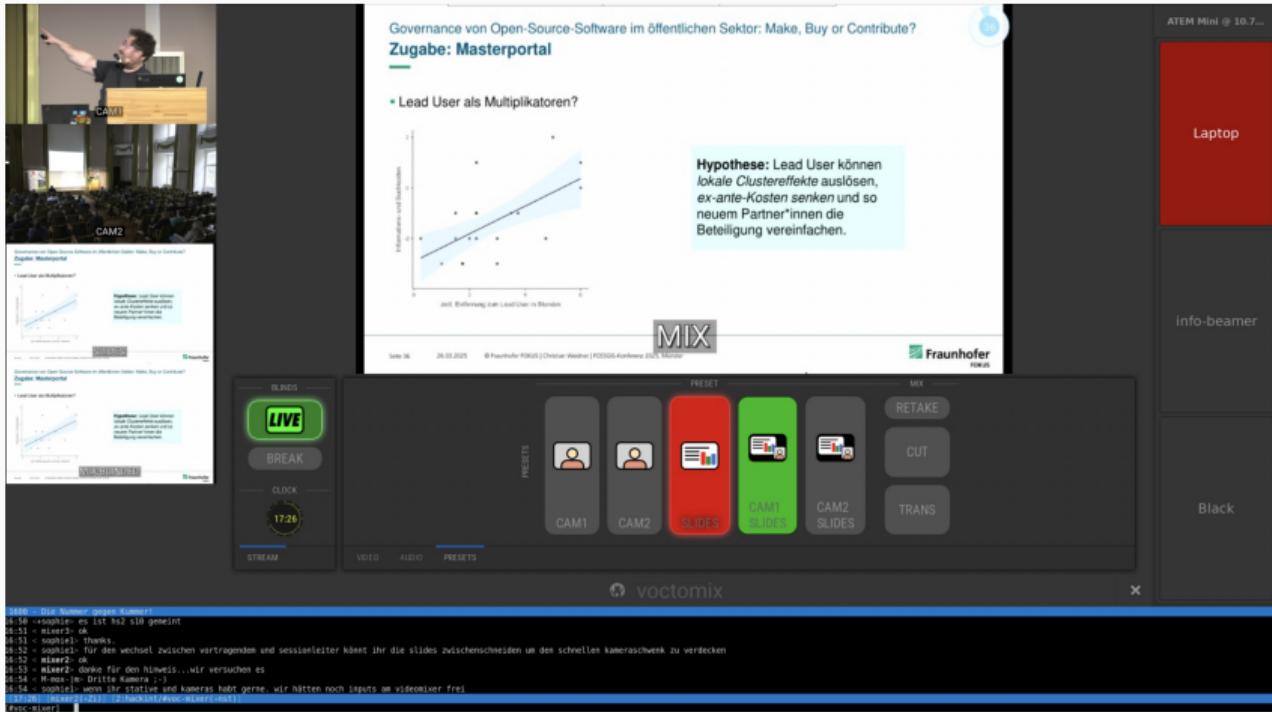


Figure 11: Voctomix2 - Overview (presets)

## Mixing with Presets

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# Voctomix2 - Presets

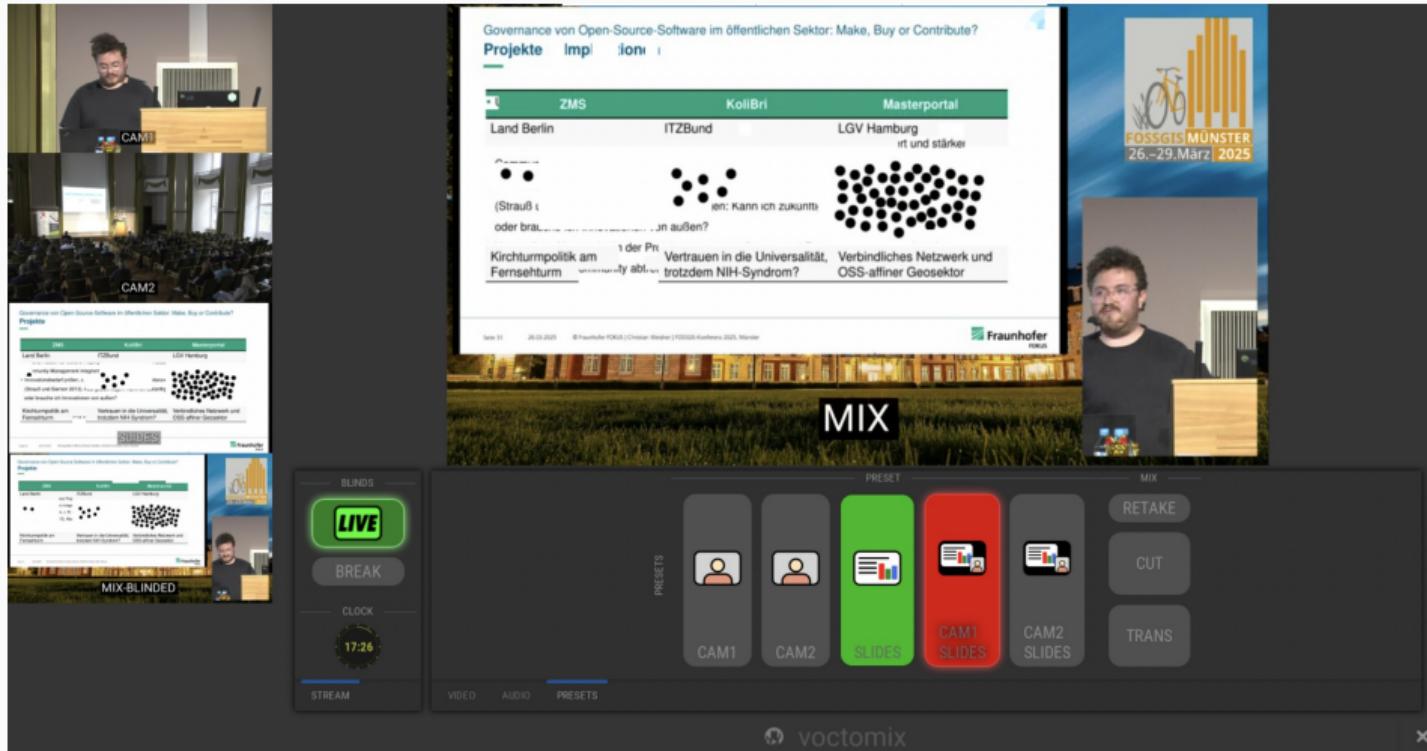


Figure 12: Voctomix2 Presets: Lecture Mode

# Voctomix2 - Presets

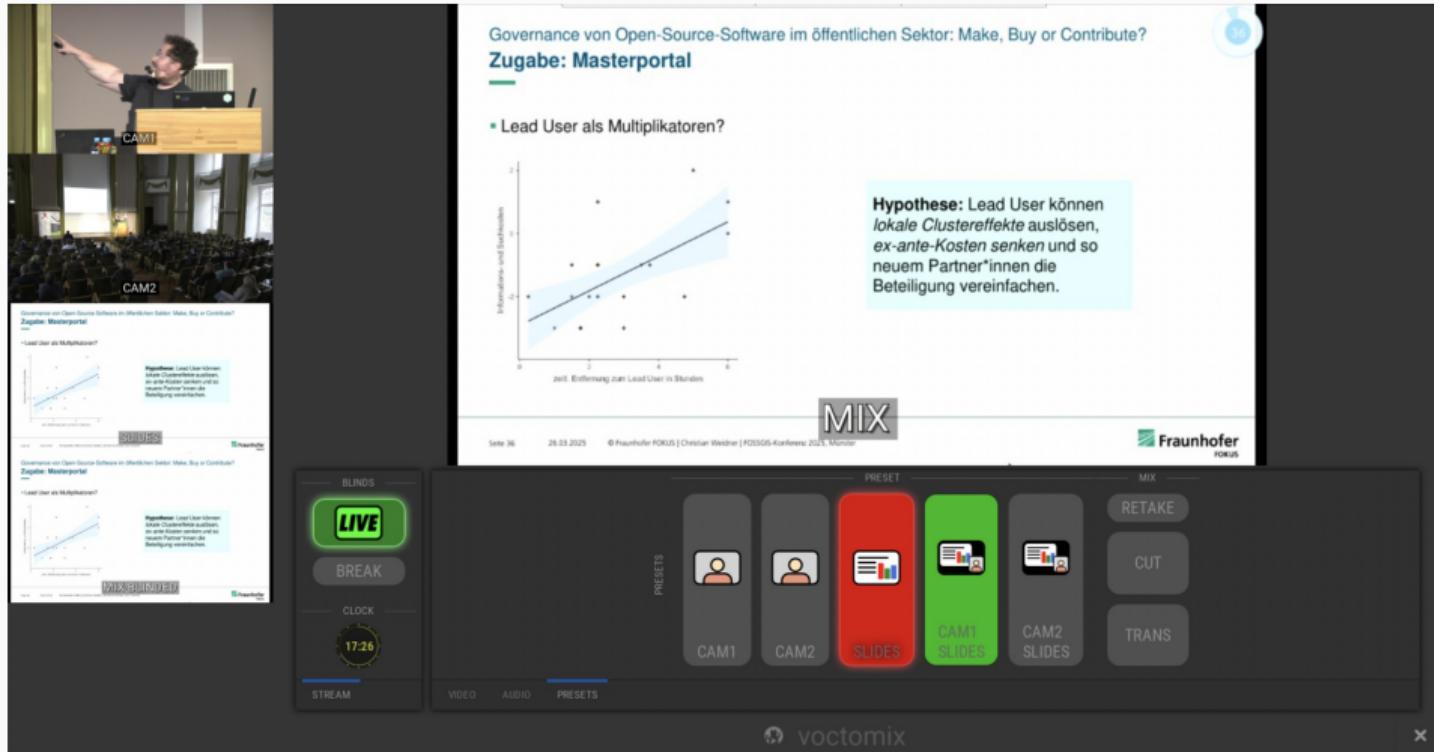


Figure 13: Voctomix2 Presets: Slides Fullscreen

## Classical Mode

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# Voctomix2 - Pre-Select



Figure 14: Voctomix2 - Lecture Mode - Pre-Selected

# Vocomix2 - Lecture Mode

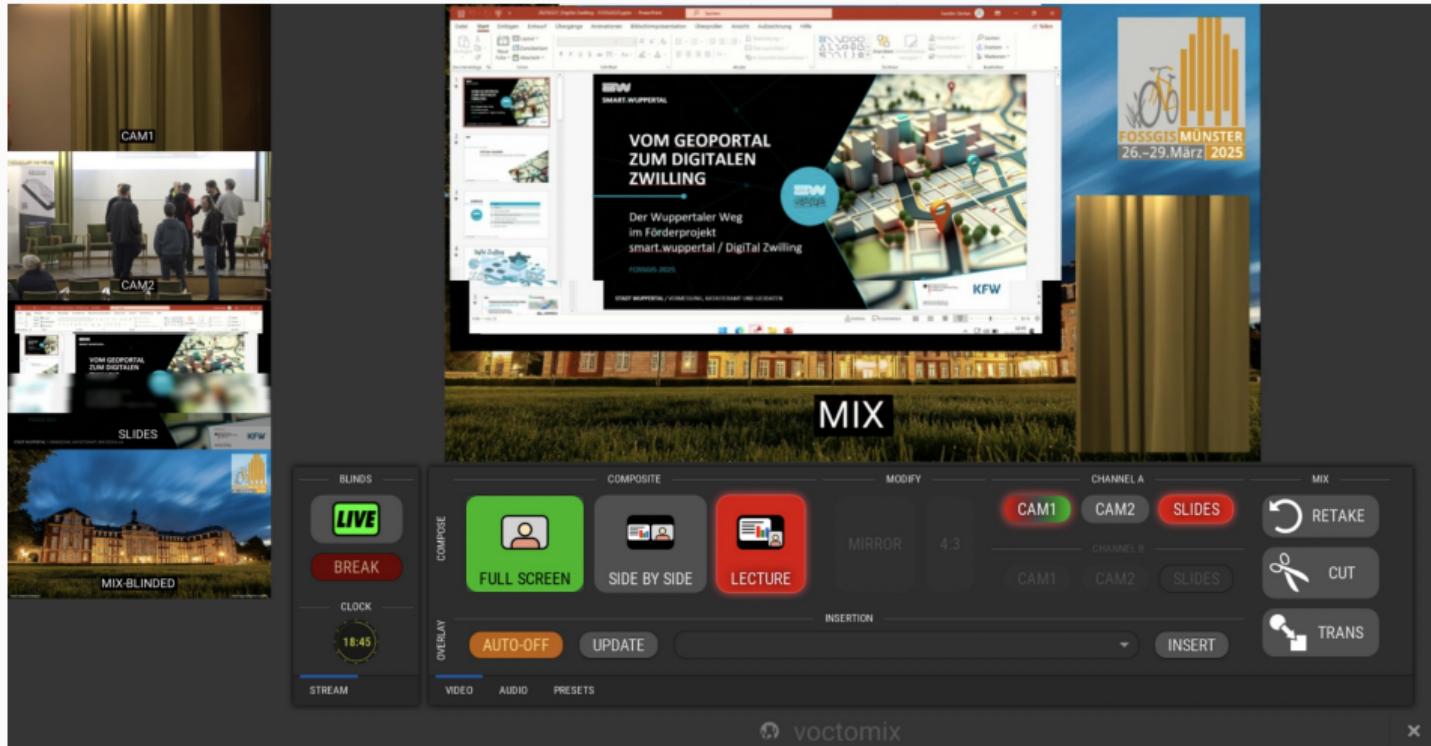
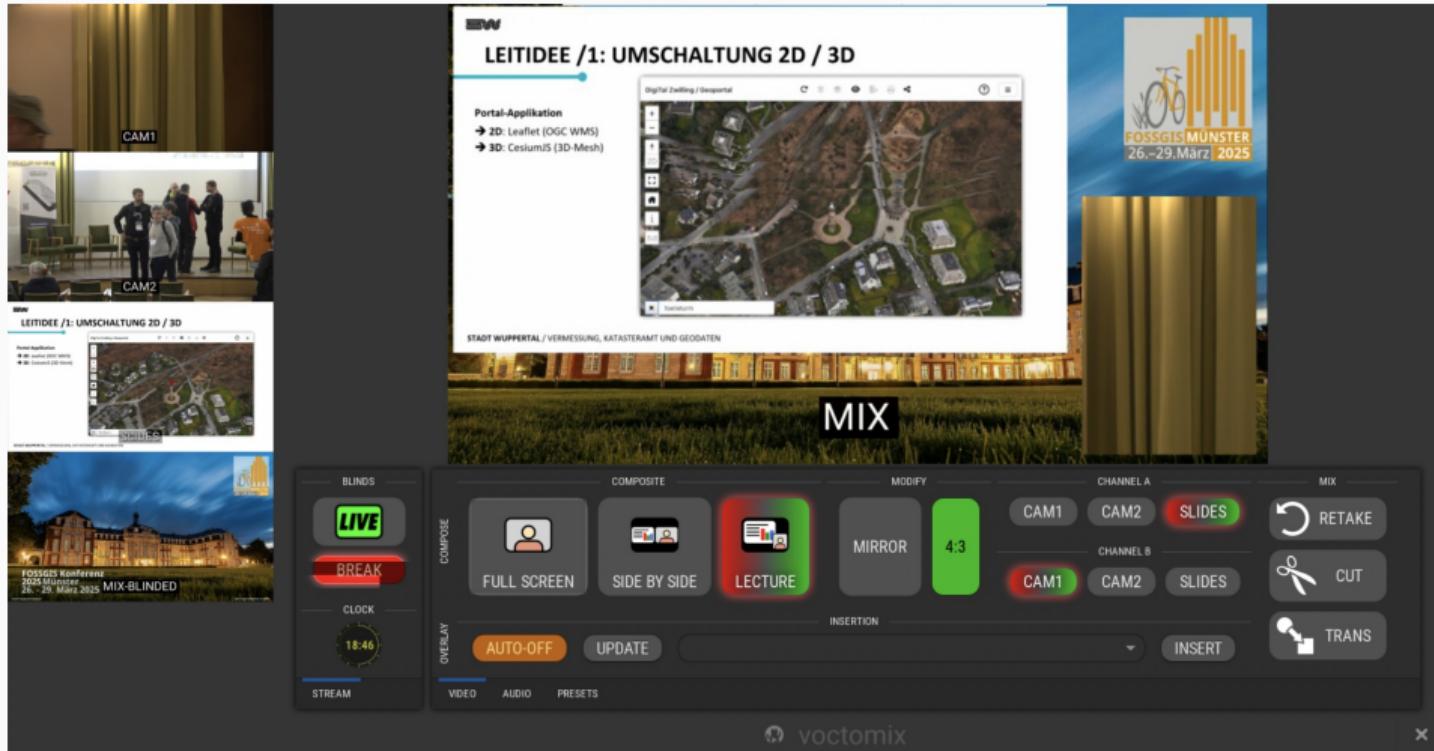


Figure 15: Vocomix2 - Lecture Mode - Live

# Voctomix2 - Lecture Mode 4:3



**Figure 16:** Voctomix2 - Lecture Mode 4:3 - Pre-Selected

# Voctomix2 - Lecture Mode 4:3



**Figure 17:** Voctomix2 - Lecture Mode 4:3 - Live

## Video Mixing Guidelines

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## Mixing Guidelines - Hard Rules

- All you are doing is **recorded** and will be published.
- The Audience is **not to be filmed**. Cut away if faces of people not on the stage appear.
- **Slides are important**
- Slides stay on till the text has been read **twice**.
- Show new slides **immediately**.

## Mixing Guidelines - Softer Hints

- Start early – opening announcements of the Herald are a good start. Their introduction has to be in the recording and on stream.
- Open wide – Structure the beginning of a talk with shots that set the stage
- The slides in fullscreen – you're dealing with a very small screen. Text has to be readable
- Show gestures – medium-close-up that follows the speakers eye-line
- Don't be too cutty – Pace your videos temperately. Do not cut too often.
- Don't end too early – All questions and answers have to be recorded. The herald ends the talk, not the mixer angel.

### Hints

Leave lots of room at the start and end of a talk. Cut away from the infobeamer before the Herald starts with announcements. Cut to the infobeamer only after the last applause has finished.

## Audio Hardware

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# Audio Mixer Controls: Layers



Figure 18: Allen & Heath CQ18T Layers

- Please make sure, to always work on "Custom Workbench D"
- If anything else is shown, contact VOC or A/V-Technician before the talk

# Audio Mixer Controls: Levels



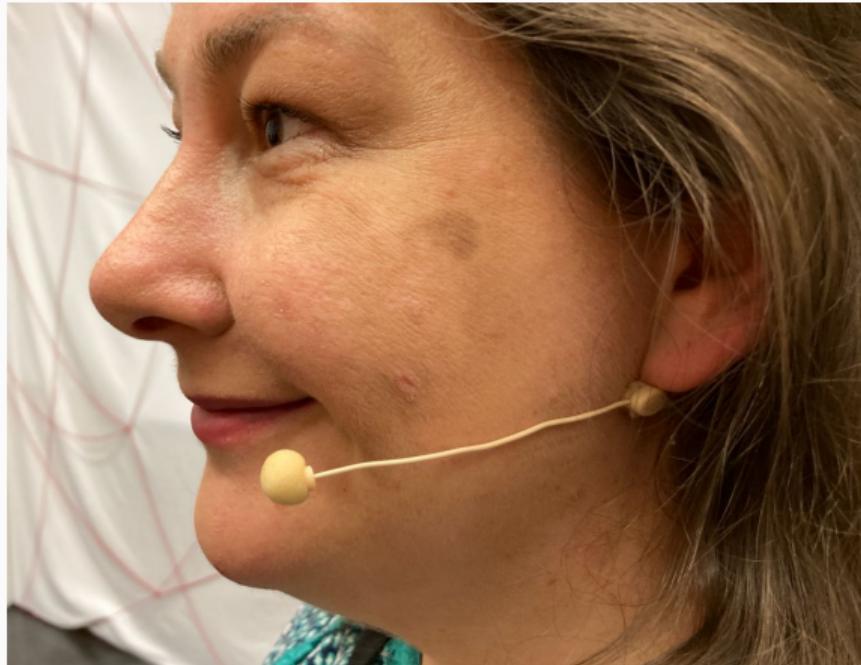
**Figure 19:** Allen & Heath CQ18T Main Controls

- Mute unused microphones (bottom row)
- Adjust hall loudness with fader labeled "PA"
- Do not use the fader labeled "NEIN"
- Please keep microphones un-muted during applause

# Microphones

- We prefer headset microphones over handheld for speakers
- Distance to mouth will be constant -> more consistent audio level
- Handheld microphones for heralds and Q&A
- Our transmitters also have a mute button (yellow light = muted)
- Please check battery level from time to time

# Headset Placement



- Microphone shall be at the corner of the mouth
- Boom can slide back and forth
- If too far in front, there will be too much wind noise
- Distance to face: About 2 cm
- Bend boom carefully

**Figure 20:** Good headset microphone placement

## Contacts and Action Items

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## Who to Contact?

- Generic Questions? Something is wrong in lecture hall?
  - Reach A/V Technician on duty
  - Call the C3VOC Helpdesk **DECT 1601**
- Do you want to talk to us? Come to the C3VOC Office

## Final Notes

- Click "join" on the angel types you want to have
- Queue up to get approved
- Select shifts:
  - Fill talks with no angels first
  - Take breaks