Technology for playing together remotely

by Bryce Denney
presented to the Concord Band
June 2020

Topics

- Social distancing - very hard to rehearse or perform
- Play together in person
- Video conferencing
- Music collaboration apps
- Virtual ensembles

Play in person, outdoors - small group

Woodwind quintet live concert

Recorded with 3 cameras

Pro Arte Chamber Orchestra of Boston

https://www.facebook.com/ProArteBoston/videos/1128207380896505

Play in person, outdoors - large group
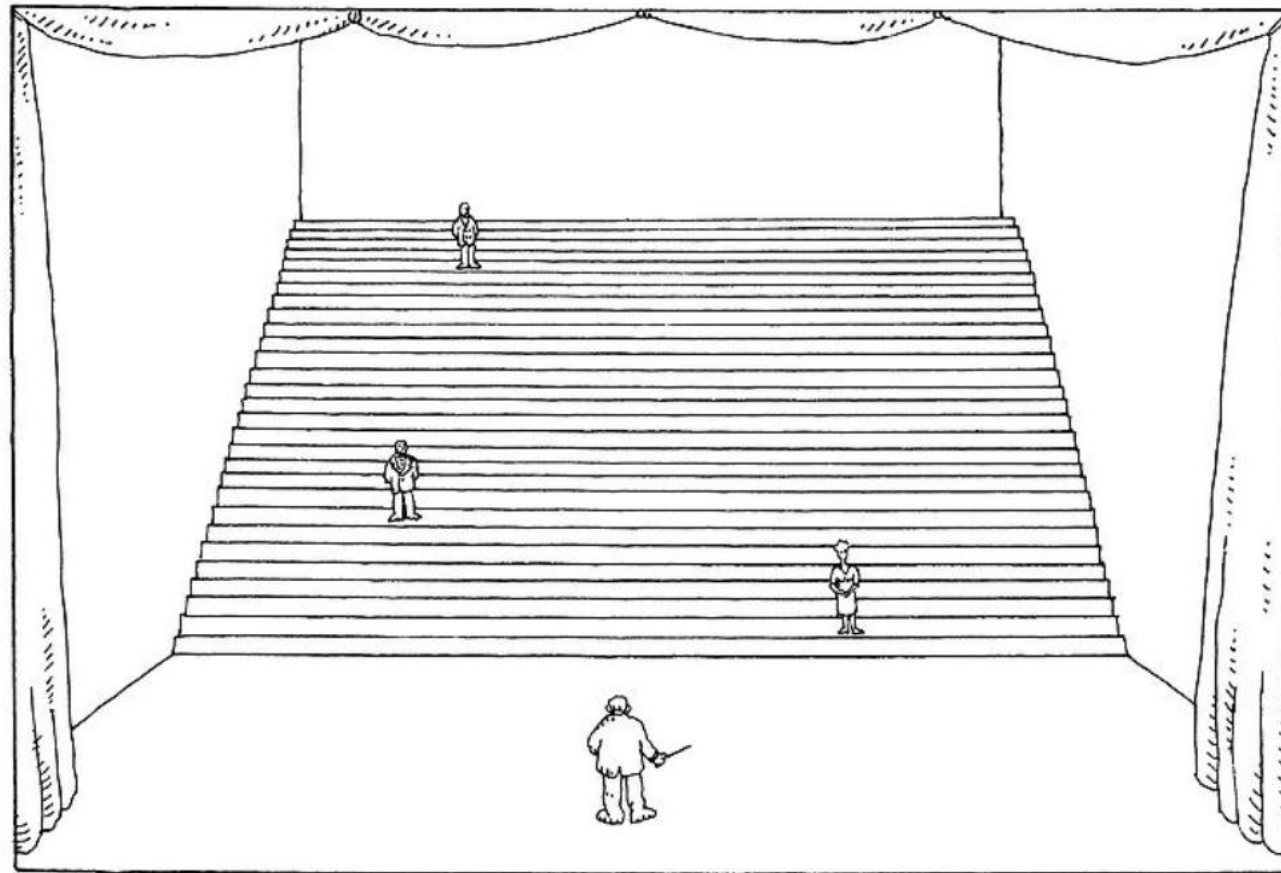

graduation ceremony in Mandan, ND - kfyrtv.com

Imagine a band playing outside, spaced out

Learn from maching bands

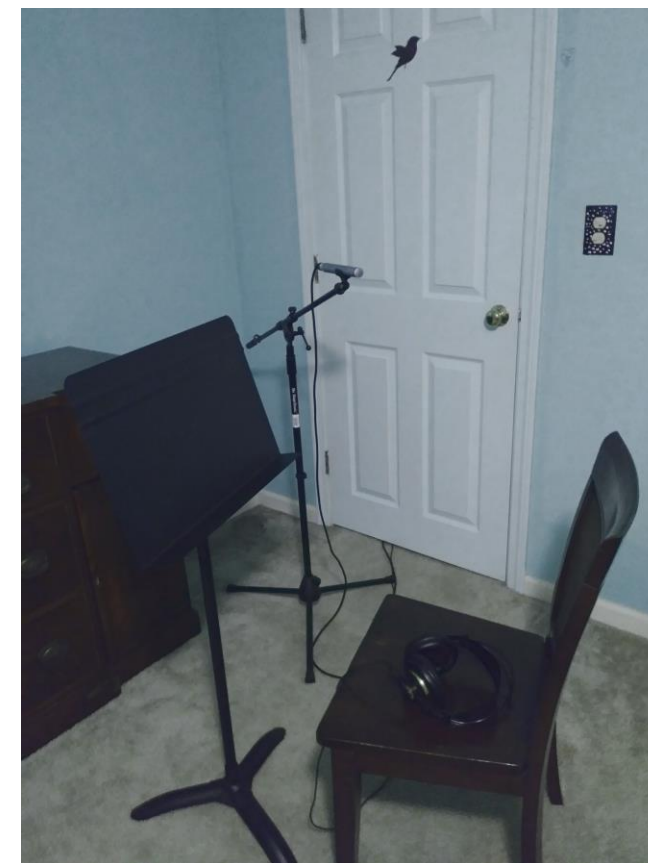Conductor needs amplification. Maybe a big shiny baton?

Play in person, indoors

THE MORMON TABERNACLE TRIO

In different rooms, with mic & headphones

see our "Driveway Choir" project - singers in cars with headsets

In plastic bubbles?

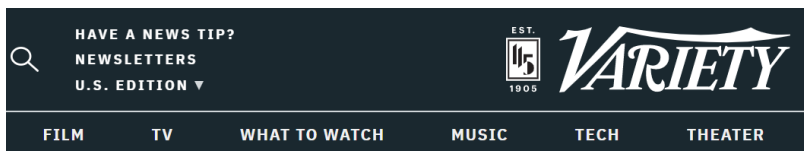2m 0.8mm PVC Inflatable Wate...

$231.74

DHgate online...

Yes, really.

HAVE A NEWS TIP?
NEWSLETTERS
U.S. EDITION ▾

VARIETY
EST. 1905

FILM   TV   WHAT TO WATCH   MUSIC   TECH   THEATER

HOME > MUSIC > NEWS   Jun 12, 2020 2:4

Flaming Lips Perform Inside Plastic Bubbles on 'Late Show With Stephen Colbert' (Watch)

By Variety Staff ⌄

Video conferencing apps

Video conferencing

- Zoom, Skype, Facetime

- Too much latency to play together

- These things work well
  - Planning, staying connected
  - Private lessons
  - One person plays at a time
  - One person plays, everyone else plays muted
  - Host shares a recording, everyone plays muted

- Zoom: Be sure to turn on "Original Sound" for music. Host must enable.
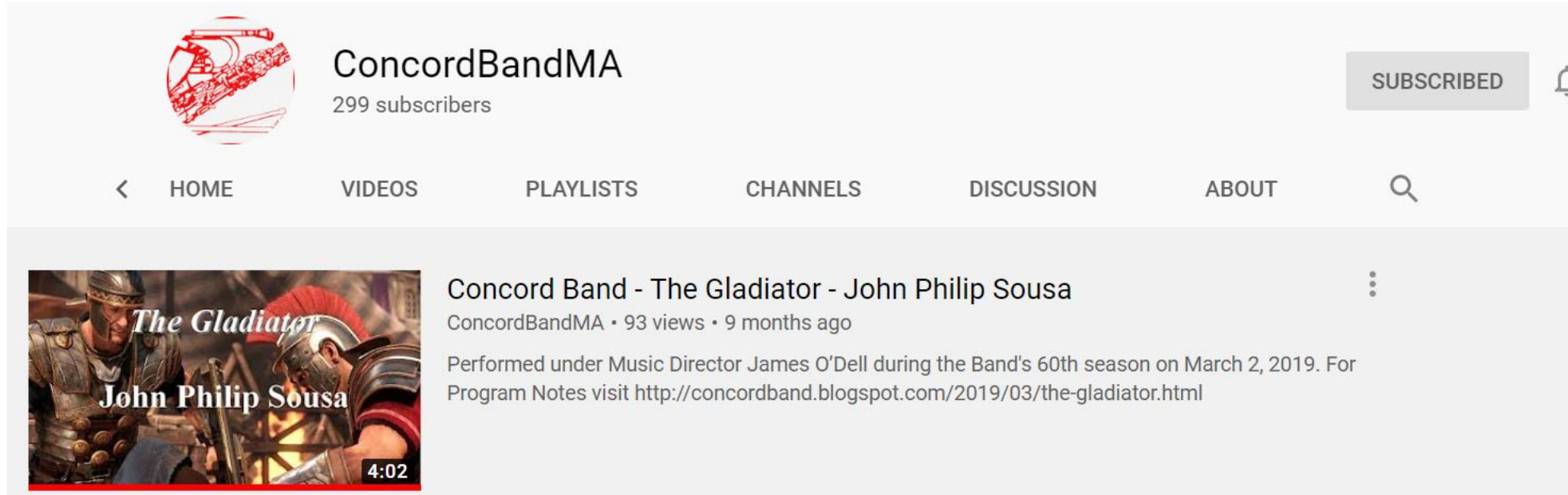
- You can never hear the whole group!
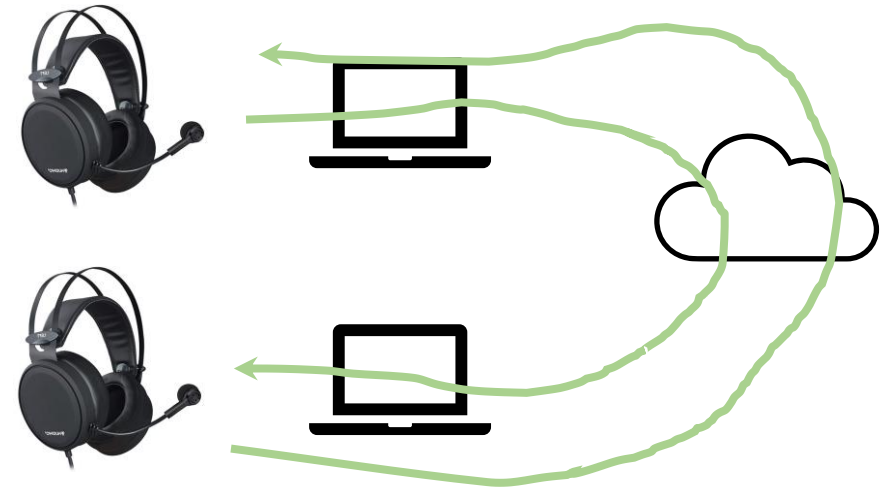
Band could play along with recording

- Send out link to music
- Players print their parts
- Schedule a Zoom session
- Host mutes everyone
- Host shares a video, everyone plays along

Band could play along with recording

US Marine band website

Band could play along with recording

https://www.youtube.com/watch?v=lwxbVYL8ASg

Music collaboration apps

Online jamming apps

- Free, designed for live music
- Much better latency
- Only small groups (2-6)
- Need fast computer, fast internet, audio interface

- Small group with tech-savvy members - Try it and let us know

SoundTrap

- Multi-track audio editor in a website
  - It works well on laptop. Poorly on cell phone.
- Different people can record different tracks, share
- Could help a group to do an audio-only project

- If you want to try this
  - Watch a SoundTrap video
  - Make a free account and try it
  - I'd be glad to help

SoundTrap example: 5 part choral piece
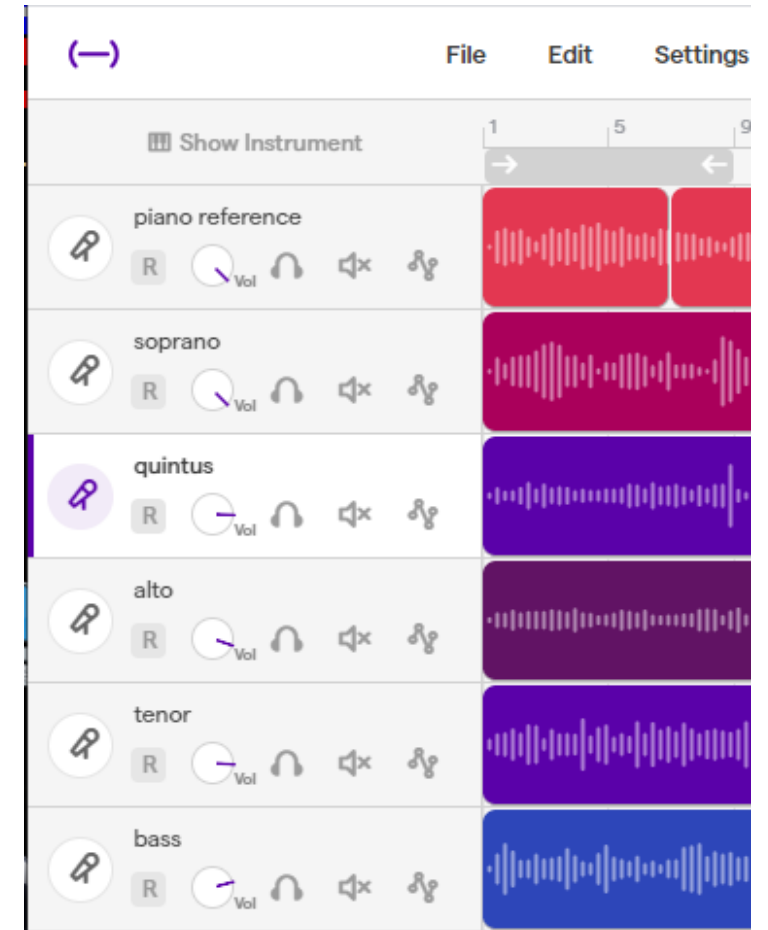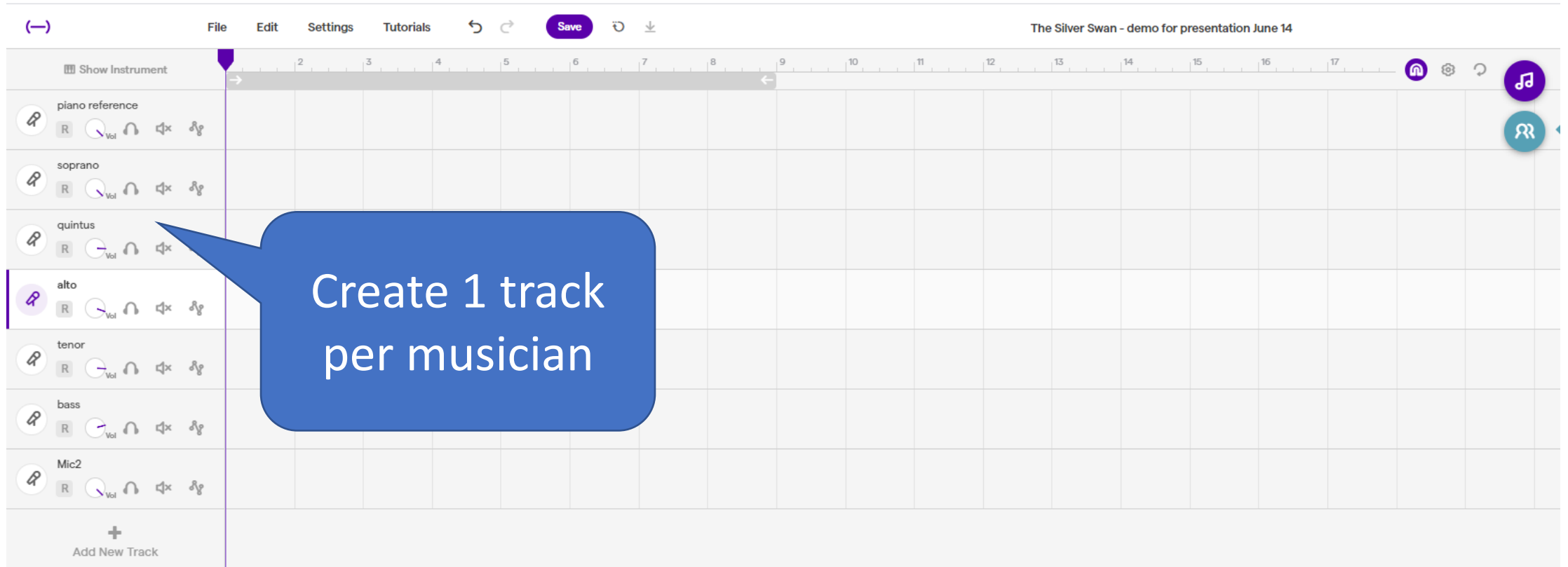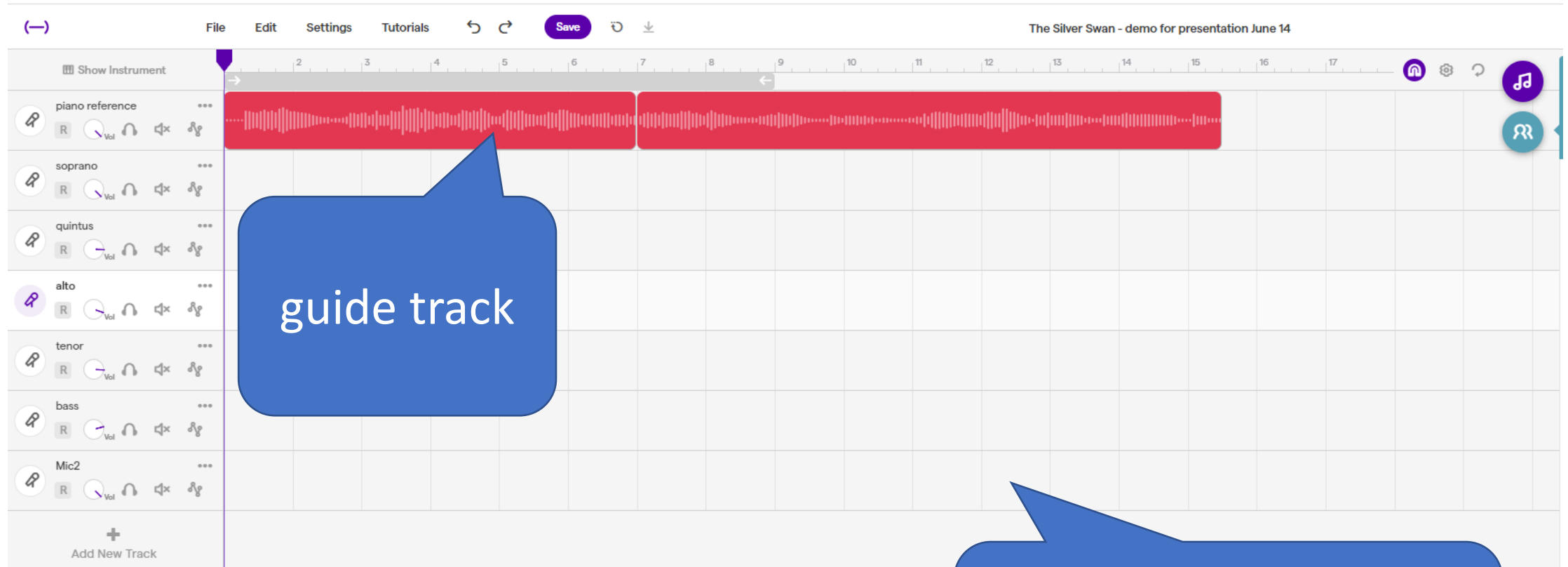
SoundTrap example: 5 part choral piece

SoundTrap example: 5 part choral piece

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SoundTrap example: 5 part choral piece

Adjust the balance
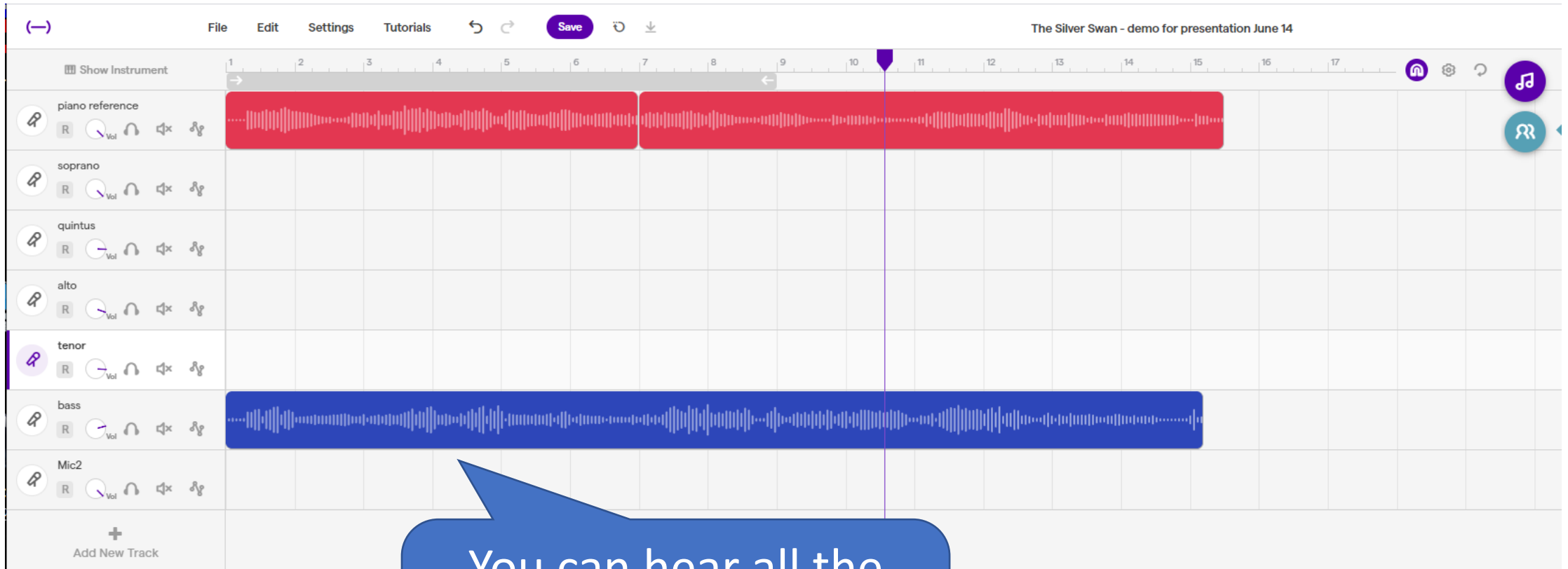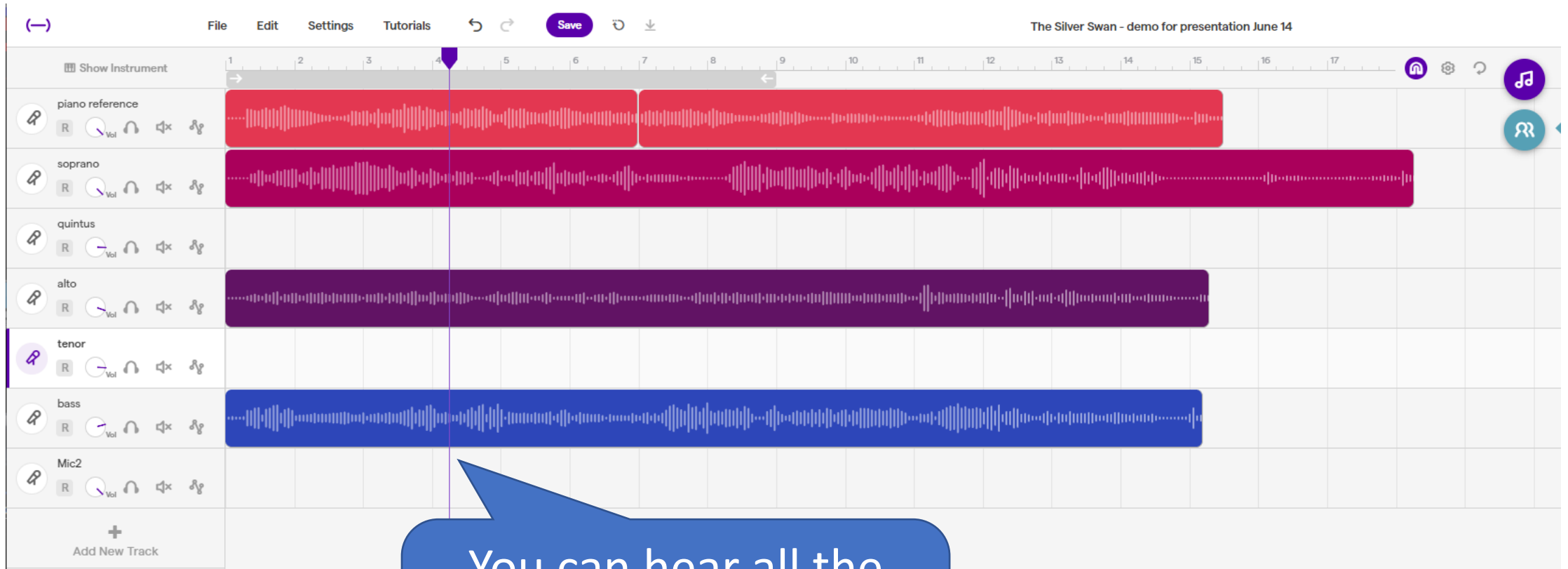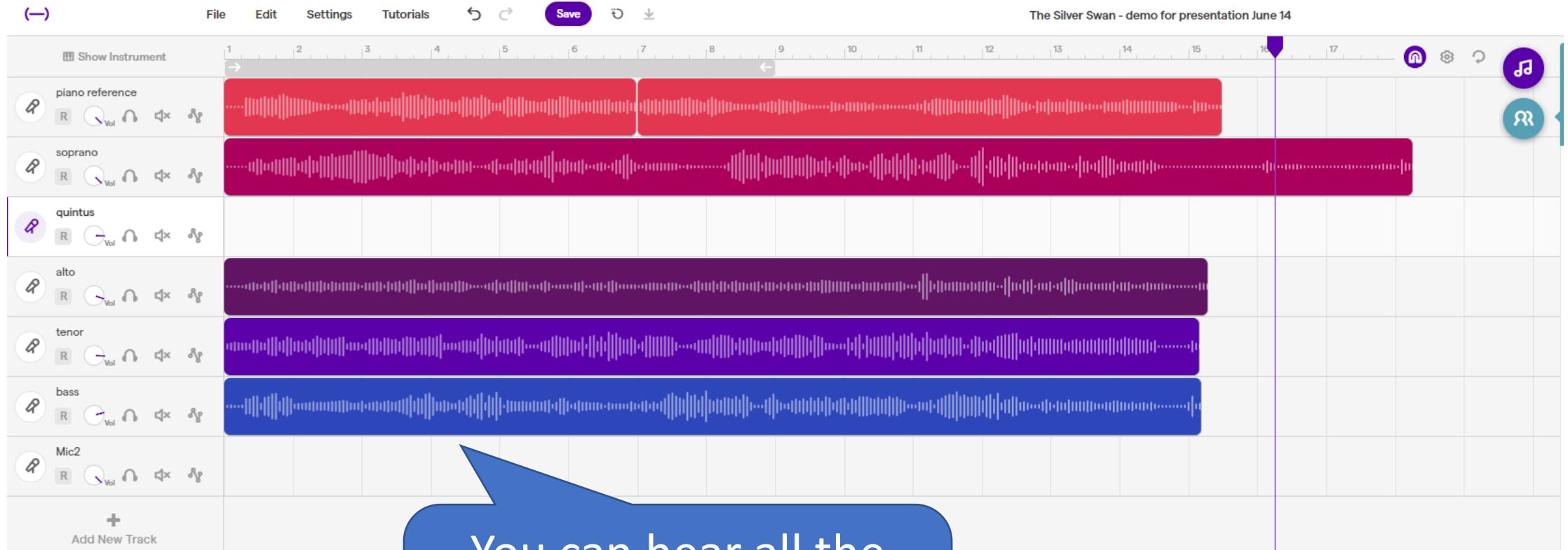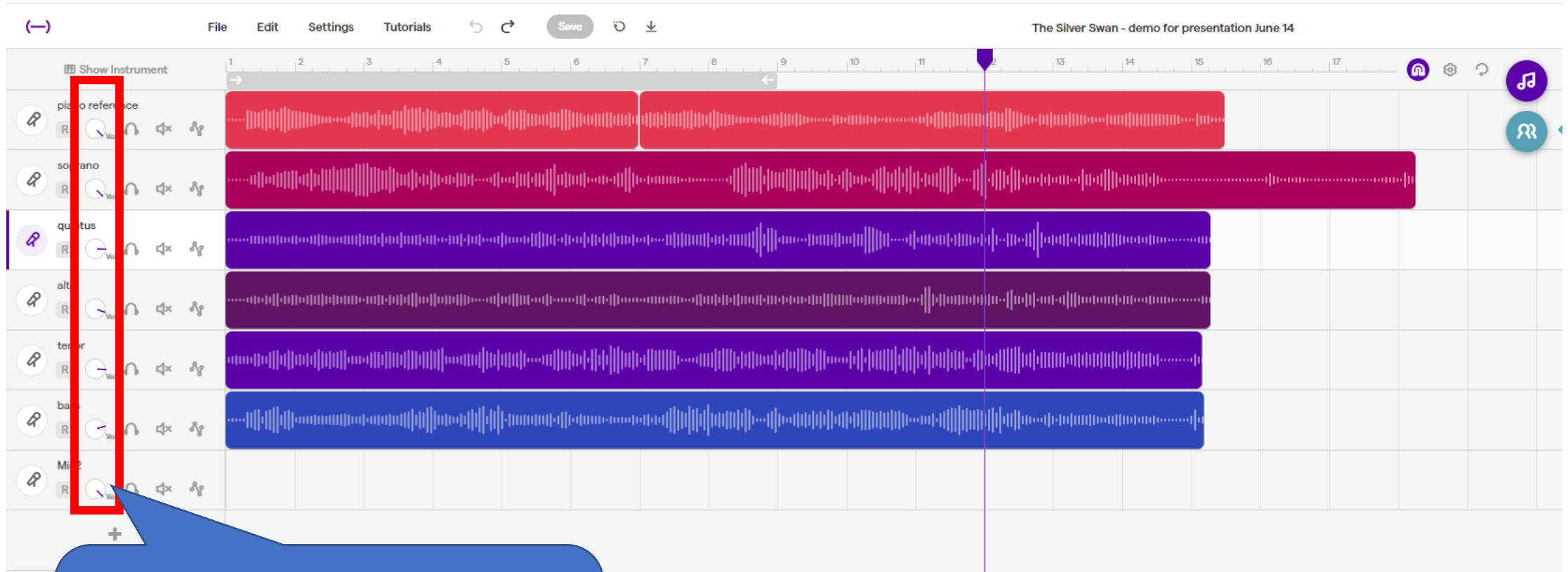
SoundTrap example: 5 part choral piece
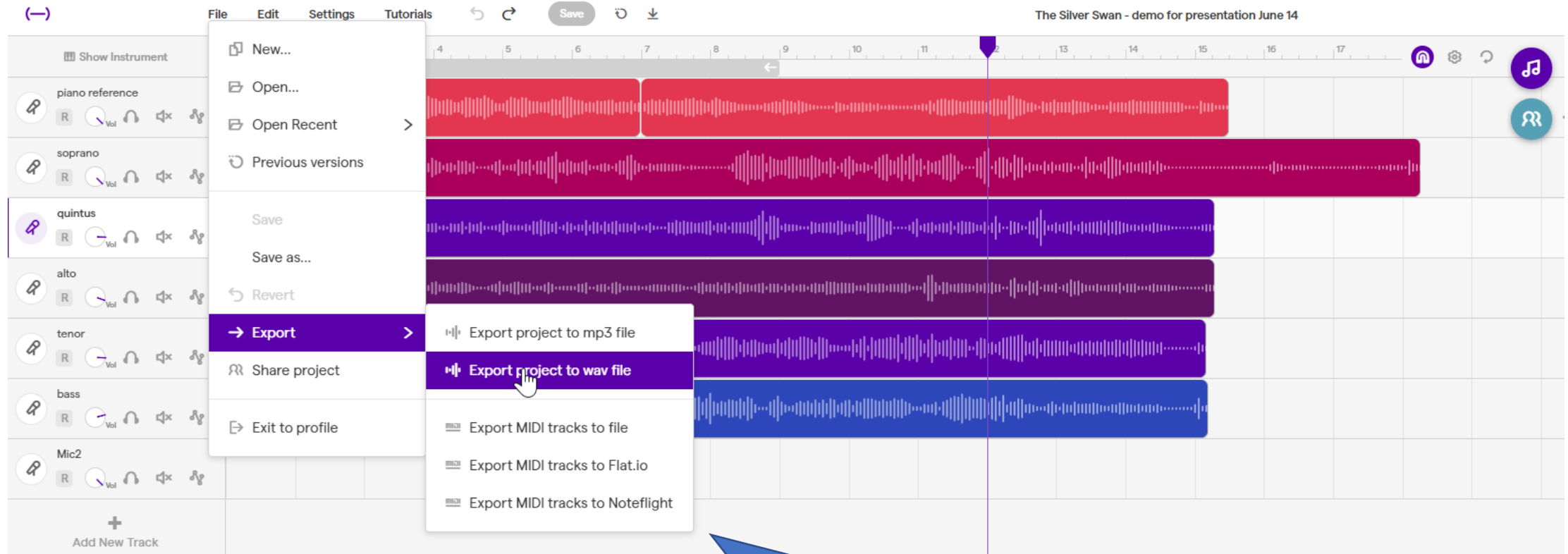
Save it as MP3 or WAV

Virtual ensembles
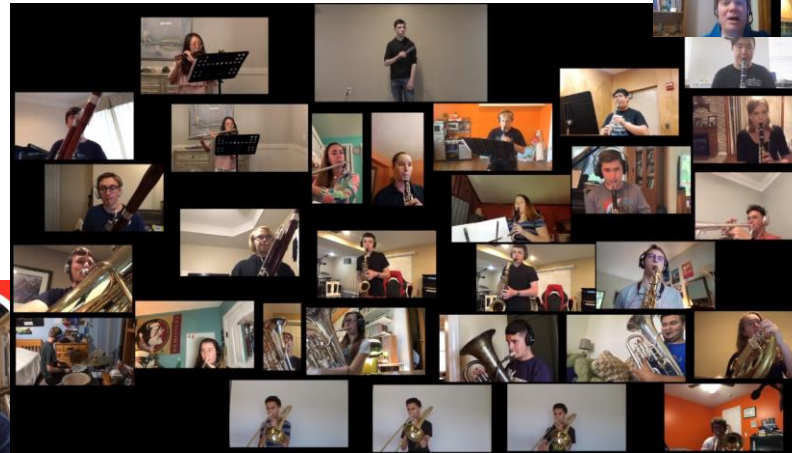
Plan a virtual ensemble project

1. Choose players and music

2. Send out a guide track

3. Everyone records themselves and submits a video

4. (optional) Audio editing

5. Video editing

Virtual ensembles: Players

Good fit for
- Confident players
- Who <u>really</u> want to play together, despite barriers
- With solid rhythm and intonation
- Who have a smartphone or video camera
- Or if players live far away

Not for everyone though
- Not social. Spend more time on tech than music.

Virtual ensembles: Music

Choosing music - these things make it simpler
- Fewer participants
- Shorter piece - start with 2-4 minutes
- Steady tempo. Few fermatas, ritards
- Not TOO many measures of rests
- You've already played it together
- (Audio only is simpler)

Virtual ensembles: Guide track

- "Everyone send me a video of you playing our part"
  - What could go wrong?

- "Send a video of you playing along with THIS"
  - LOUD and CLEAR
  - Short percussive sounds are easier to follow
  - Doesn't need to sound "good"
  - Audio matters more than video

Example guide track - LINK

- Hints
  - Start with: "Please clap on the count of 4. 1,2,3,4." Helps with editing later.
  - Add voice counting beats to clarify entrances, ritards, cutoffs.

Guide track choices

<---- less work . . . . more work ---->

Existing recording

Metronome

Conductor

Piano

Synthesizer/ MIDI instruments

Hint: You can slow it down.

Audio track is usually more helpful than video.

Choose sounds with clear attack and stable pitch.

Virtual ensemble recording

- Everyone takes a video of themselves playing their part
  - while listening to guide track in headphones
- Google for "virtual choir recording instructions" for many examples. Example1 Example2
- Example setup:
  - Laptop plays guide track to earbuds
  - Cell phone on music stand, taking a video
- Create public Google Drive folder and ask people to add their videos
 - many alternatives - use what you're familiar with

Video editing

- I'll demonstrate with WeVideo, a simple video editor website
- Demo
  - Take 3 clips, synchronize them, shrink and arrange them
  - Trim off the "clap"
  - Adjust the balance, add dynamics back in
  - Players can fade out when not playing
  - Change layout, e.g. make soloist full screen, rearrange them
  - Add title in front   (be sure to move clips together)
- If separate audio editing, add it and mute the others

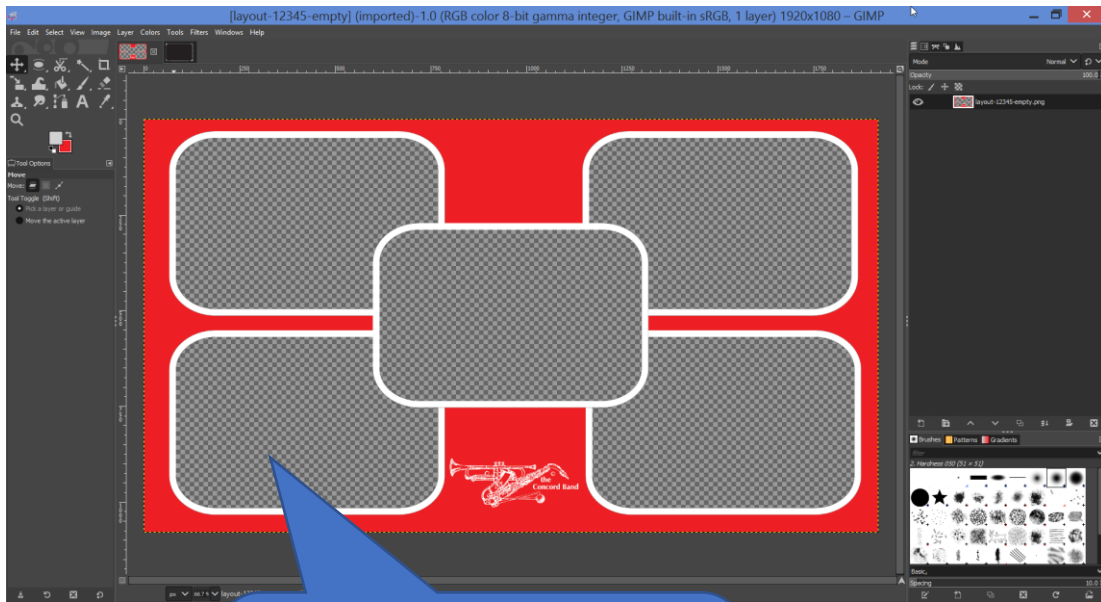# Video editor screen shot - Cyberlink PowerDirector

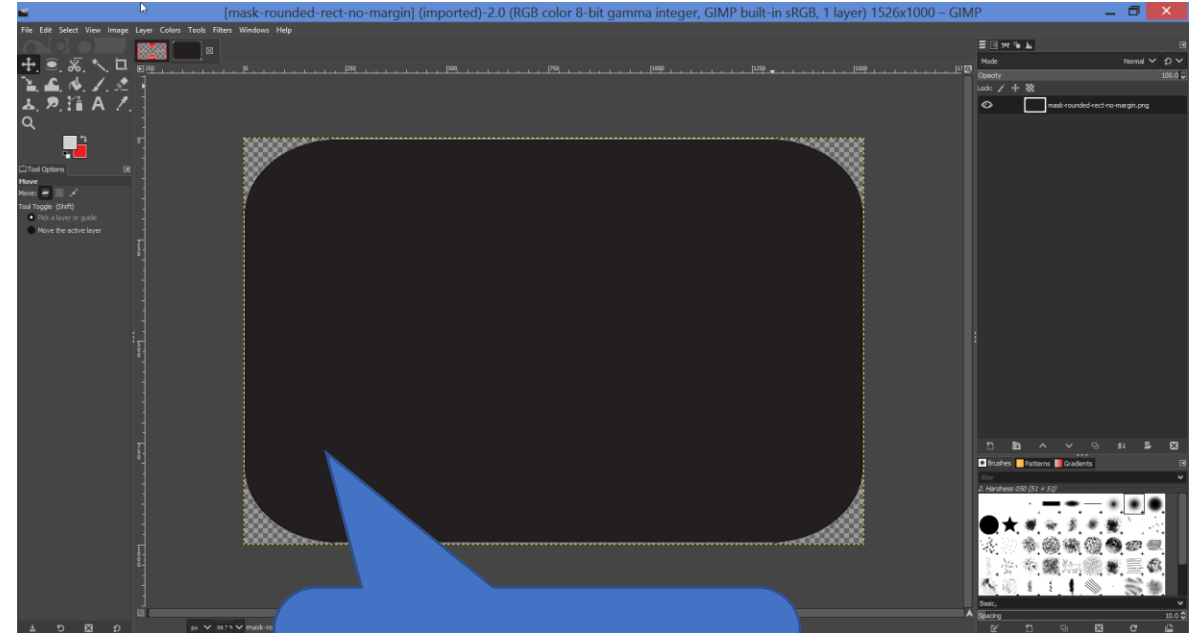# All the video tracks for Bankelsangerlieder
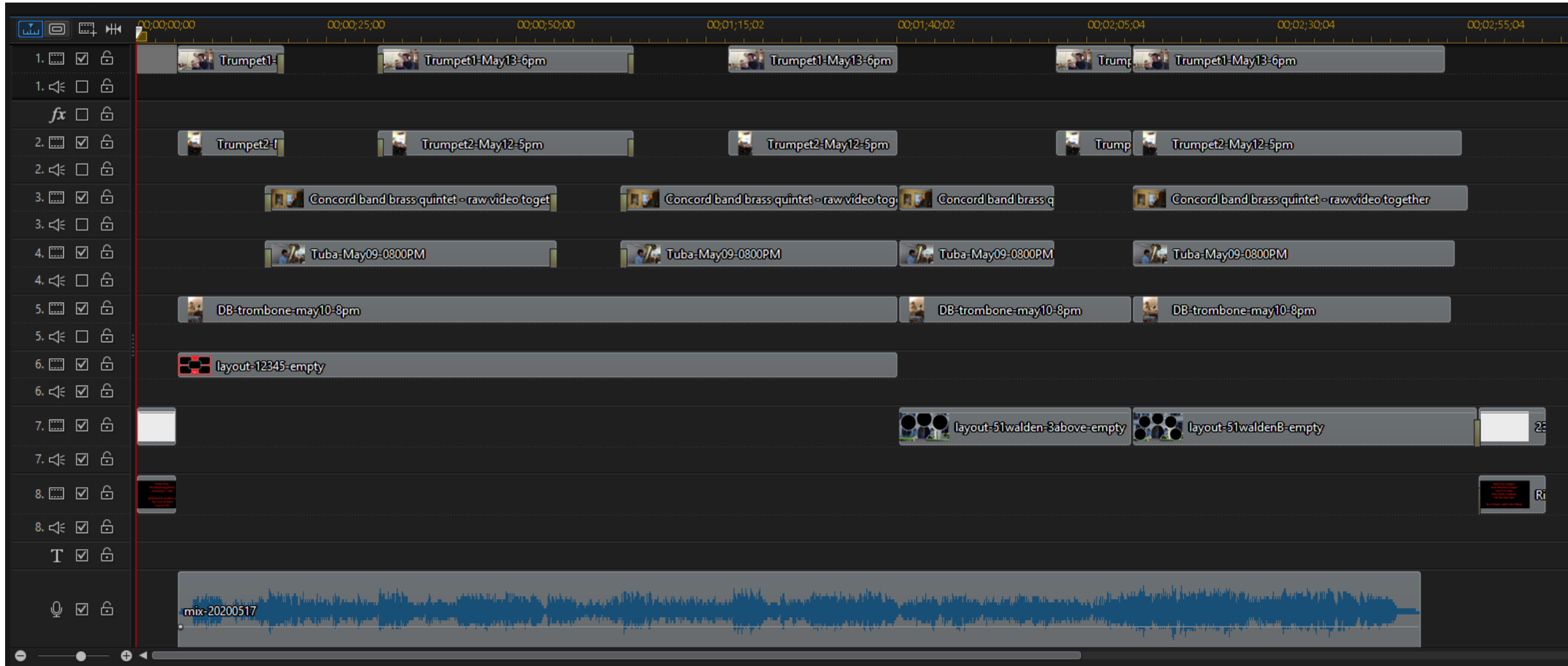
Getting fancy: Backgrounds, masks

Made these images in GIMP (free), with some help from Adobe Illustrator (commercial).

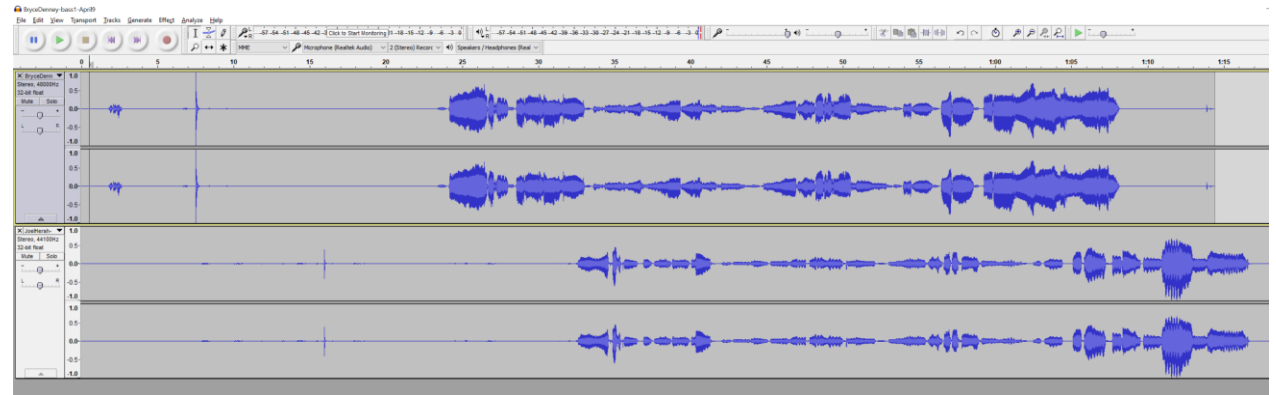PNG image file with transparent areas for videos

This mask controls which part of a video will show

Audio editing

- Optional
- Simpler and free: Audacity
- More complex and $100: Cubase

- Audacity demo:
  - Line up Bryce, Joel, Ben in HailPoetry\extracted-audio-apr13\bass1
  - Amplify
  - Trim off the "clap"
  - File > Export audio. Save as WAV
- Good enough for simple project

Audio editing - Cubase

- Cubase demo: Show Cubase file for "Hail Poetry" virtual choir
  - Sopranos all organized into a folder, one volume knob to adjust whole section
  - Listen to one, whole section, whole group
  - Some people's videos have noise. EQ(equalization) can often reduce it.
  - Someone was late on a cutoff. Fade them out gently.
  - Adjust volume at specific times

Cubase tour: "Hail Poetry" virtual choir
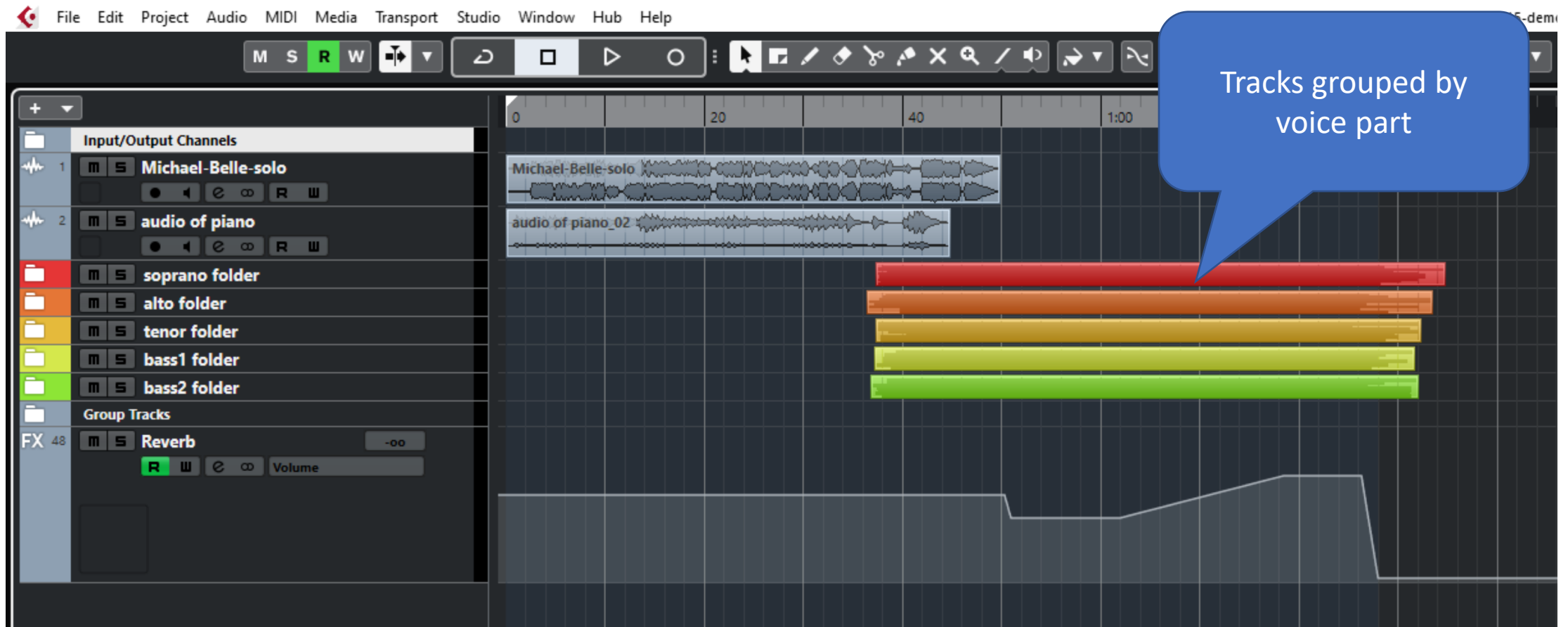
Cubase tour: "Hail Poetry" virtual choir
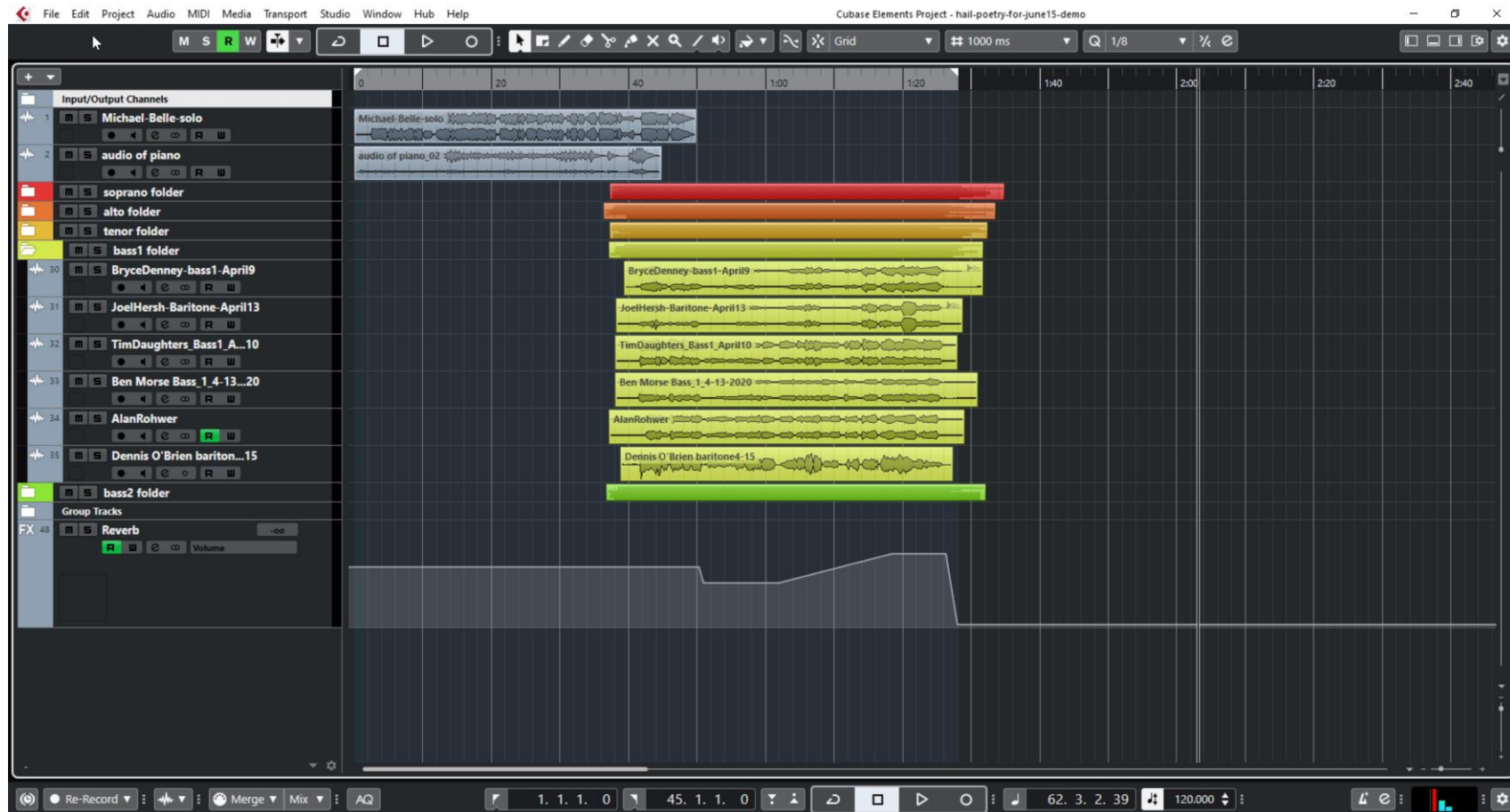
Cubase tour: "Hail Poetry" virtual choir

Wrapping up

- Virtual ensembles can look and sound great. Great publicity.
- They are tech heavy. Often more time spent on tech than music.
- Consider live, in-person alternatives
  - Play outside (distant)
  - Play inside (distant)
- And simpler remote alternatives
  - Zoom play-along
  - Multitrack audio
- Simpler project -> you play more music