Audacity Settings for TTS Voice Cloning

Required Audio Specifications for XTTS

- **Sample Rate**: 22050 Hz
- **Channels**: Mono (1 channel)
- **Format**: 16-bit PCM WAV
- **Duration**: 10-30 seconds of clean speech
- **Quality**: Minimal background noise, single speaker

Recording New Audio

1. Set Project Settings

- **Project Rate**: Bottom-left corner of Audacity → set to **22050 Hz**
- **Quality Settings**: Edit → Preferences → Quality → Default Sample Rate: **22050 Hz**

2. Recording Setup

- Use a good microphone in a quiet environment
- Record 15-30 seconds of natural speech
- Avoid background noise, mouth sounds, or interruptions
- Speak clearly and at normal volume

3. Export Settings

1. **File** → **Export** → **Export as WAV**
2. In export dialog:
   - **Sample Rate**: 22050 Hz
   - **Channels**: Mono
   - **Encoding**: 16-bit PCM
3. Click **Save**

Converting Existing Audio Files

Method 1: Import and Resample

1. **File** → **Import** → **Audio** (load your existing file)
2. **Tracks** → **Resample** → Enter **22050**

3. **File** → **Export** → **Export as WAV** with settings above

Method 2: Project Rate Conversion

1. Set project rate to 22050 Hz (bottom-left)
2. **File** → **Import** → **Audio**
3. **Tracks** → **Mix** → **Mix and Render to New Track**
4. Delete original track, keep resampled version
5. Export as WAV

Audio Quality Tips

- **Clean Speech**: Remove "ums," coughs, mouth sounds
- **Consistent Volume**: Use Effect → Amplify or Normalize if needed
- **Noise Reduction**: Effect → Noise Reduction (if background noise present)
- **Single Speaker**: Only your voice, no music or other people

Quick Verification

- Check bottom-left of Audacity shows "22050" for project rate
- After export, verify file properties show 22050 Hz sample rate
- Test file duration is 10-30 seconds

Troubleshooting

- **TTS uses default voice**: Usually incorrect sample rate (not 22050 Hz)
- **Poor voice cloning**: Audio too short, noisy, or multiple speakers
- **File not recognized**: Wrong format - must be WAV, not MP3/M4A

Final TTS Command

```bash
tts --model_name tts_models/multilingual/multi-dataset/xtts_v2 --text "Your text here" --speaker_wav your_voice_22k.v
```