STRETCHLEARN · WORKBOOK

Audio Editing & Post-Production — Workbook

This workbook accompanies the Audio Editing & Post-Production course, giving you structured exercises, reference worksheets, and checklists to apply each technique to real recordings. Work through each section after completing its corresponding course module, then use the action plan and templates as your ongoing reference for every future project.

Understanding the Audio Post-Production Chain

Map your own recording problems to the correct processing stage and set up a session that will support the full chain.

Exercise: Diagnose a Raw Recording

Import any raw recording you have — a podcast episode, a recorded interview, or a voiceover take. Switch between waveform and spectrogram view and study it for 5 minutes before doing anything else.

• What is the noise floor level in dBFS during the silence sections between words? Write the measurement here.

• Describe in plain language what you see in the spectrogram: are there horizontal lines (hum), uniform high-frequency smear (hiss), or sudden bright spikes (clicks)?

• Based on what you observed, list which processing stages from the six-stage chain you expect this recording to need, and in what order.

• What room-tone sample do you have available, and how long is it? If none exists, which silence gaps are long enough to use as a noise print?

Worksheet: Session Setup Reference

Fill in the setup details for the recording project you will process throughout this workbook. Use this as a reference sheet when starting future sessions.

Client or project name

Recording date

DAW and version used

Project sample rate (Hz)

Project bit depth

Delivery platform (podcast / broadcast / video edit / audiobook)

Delivery loudness target (LUFS)

Delivery true peak ceiling (dBTP)

Location of raw original files (folder path)

Location of working copies (folder path)

Room tone available? (Yes / No) — duration in seconds

Notes on recording conditions (room, microphone, gain setting)

Checklist: Session Setup Checklist

[ ] Create a /raw folder and copy the original files there — never process the original
[ ] Set DAW project to 48 kHz / 24-bit before importing files
[ ] Import the room-tone sample on a separate track labeled Room Tone
[ ] Check that no tracks are clipping (flat-topped waveforms) before proceeding
[ ] Record or locate a 15+ second room-tone sample for the noise profile
[ ] Save the session file and label it with the date and project name
[ ] Open the spectrogram view and identify at least one visible noise problem

Noise Reduction and Audio Repair

Apply broadband noise reduction, hum removal, and click repair to your working recording and verify the results.

Exercise: Two-Pass Noise Reduction Experiment

Apply noise reduction to your working recording twice: once using an aggressive single-pass setting and once using two lighter passes. Export both versions and compare them on headphones.

• Single-pass test: apply 20 dB noise reduction in one pass. Describe what you hear in the S and T sounds — is there metallic warbling or underwater mush?

• Two-pass test: apply 10 dB noise reduction, export, then apply another 10 dB pass. How does the result compare to the single-pass version on the same consonants?

• Measure the noise floor in dBFS RMS on a silent section in both versions. Which achieved a lower noise floor while sounding more natural?

• What settings will you use as your starting point for future recordings of this type?

Worksheet: Noise Reduction Processing Log

Record your noise reduction settings for each project you complete. After five projects, review patterns to identify your optimal default settings by recording type.

Project / file name

DAW and plugin used

Noise reduction amount (dB)

Sensitivity setting

Number of passes

High-pass filter frequency (Hz)

Noise floor before processing (dBFS RMS)

Noise floor after processing (dBFS RMS)

Artifacts present? (Yes / No) — describe if Yes

Final settings used (keep or adjust from above?)

Checklist: Noise Reduction QC Checklist

[ ] Capture noise print from a clean room-tone section before applying reduction
[ ] Apply noise reduction at 10–12 dB maximum per pass — repeat if needed
[ ] Apply high-pass filter at 80–100 Hz after noise reduction to remove rumble
[ ] A/B the processed and original at matched peak level on closed-back headphones
[ ] Check for metallic warbling specifically on S, SH, and T consonants
[ ] Measure the noise floor of a silence section and confirm it is below -55 dBFS RMS
[ ] Check for hum at 60/50 Hz and harmonics in the spectrogram — apply notch filters if needed
[ ] Inspect spectrogram for click spikes and repair or fade them out manually

EQ, Compression, and De-essing

Build your first complete EQ and dynamics chain for a speech recording, document your decisions, and evaluate the result.

Exercise: Build Your Speech EQ Chain

Using the sweep-and-cut technique described in the course, identify and treat the key problem frequencies in your working recording. Build a parametric EQ chain with at minimum a high-pass filter and one problem-frequency cut.

• Perform the sweep-and-cut at Q=10, +12 dB from 200 Hz to 800 Hz. At what frequency does the box or nasal resonance peak? Write the frequency and the cut amount you applied.

• Apply the presence boost at 2.5 kHz, +1.5 dB, Q=0.7. Does the voice cut through better on laptop speakers? If not, shift the center frequency up or down by 500 Hz and describe the change.

• After applying your EQ chain, A/B it against the pre-EQ version at matched loudness. Write one sentence describing the difference in character.

Worksheet: EQ and Dynamics Chain Settings

Document the complete processing chain for this project. This becomes your reference template for similar recordings.

High-pass filter frequency (Hz) and slope (dB/octave)

Low-shelf frequency and gain (dB)

Problem resonance frequency (Hz), gain cut (dB), Q value

Presence boost frequency (Hz), gain (dB), Q value

High-shelf frequency and gain (dB)

Compressor: threshold (dBFS), ratio, attack (ms), release (ms), knee type

Compressor: average gain reduction observed (dB)

Compressor: makeup gain applied (dB)

De-esser: center frequency (Hz), threshold, reduction amount (dB)

Gate: threshold (dBFS), attack (ms), release (ms), range (dB)

Checklist: Dynamics Processing Checklist

[ ] Apply all EQ before compression — compression on an unEQ'd signal amplifies the problems
[ ] Set compressor threshold so gain reduction is 3–6 dB on loud moments, near zero on normal speech
[ ] Use ratio 2:1 to 3:1 for transparent speech compression — do not exceed 4:1 on the first pass
[ ] Set attack 10–20 ms to preserve consonant transients and intelligibility
[ ] Set release 50–100 ms and verify no pumping or breathing artifacts between sentences
[ ] Apply de-esser after compressor — confirm it catches S sounds without lisping
[ ] Set gate threshold just above the noise floor and check that word beginnings and endings are not cut
[ ] A/B the full EQ + compression chain against the cleaned (pre-dynamics) version at matched loudness

Limiting, Mastering, and Delivery

Complete the final loudness normalization and export steps, verify the file against delivery standards, and document the deliverable.

Exercise: Loudness Normalization Practice

Measure the integrated LUFS of your processed recording, calculate the gain adjustment needed to reach your delivery target, apply it, and verify the true peak.

• Measure the integrated LUFS of your current processed file. Write the measurement: _____ LUFS. Your delivery target is _____ LUFS. The required gain adjustment is _____ dB.

• After applying the gain adjustment and the limiter ceiling of -1.0 dBTP, measure the true peak of the exported file. Does it stay at or below -1.0 dBTP? If not, lower the limiter ceiling by 0.5 dB and re-export.

• Listen to the exported file on earbuds and on your laptop or phone speaker. Does the loudness feel consistent with a professional podcast episode or broadcast program you are familiar with?

Worksheet: Delivery QC Sheet

Complete this sheet for every deliverable before sending it to a client or publishing it. File it alongside the exported audio.

Project / episode title

Delivery date

Export file name

Export format (WAV / MP3 / AAC) and bit rate or bit depth

Sample rate of export

Measured integrated LUFS of exported file

Measured true peak of exported file (dBTP)

Delivery platform target LUFS

Delivery platform true peak limit (dBTP)

Pass or Fail — loudness

Pass or Fail — true peak

Playback tested on: earbuds / laptop speakers / studio monitors

Any artifacts noted during final listen

Archive master file location

Checklist: Final Delivery Checklist

- [ ] Set limiter ceiling to -1.0 dBTP with true-peak detection mode enabled
- [ ] Measure integrated LUFS using Youlean Loudness Meter or DAW statistics before export
- [ ] Apply gain adjustment to reach delivery target before the limiter — do not change the limiter ceiling
- [ ] Export to the correct format for the delivery context (see format guide in the course)
- [ ] Open the exported file in a fresh player and confirm it plays from start to end without error
- [ ] Measure the exported file's integrated LUFS and true peak after export — confirm both values
- [ ] Listen at 1.5x speed through the full episode to catch any remaining edit artifacts
- [ ] Label the file with ClientName_EpisodeTitle_YYYYMMDD_LUFS-XX_DELIVERABLE format
- [ ] Store the archive master (unmastered WAV) in a separate folder before sending the deliverable
- [ ] Send a processing summary note to the client listing the LUFS target and format specifications

Your Action Plan

1. Record 15–30 seconds of room tone at the start of every recording session before the talent speaks
2. Set up a processing template in your DAW with the six-stage chain pre-built: noise reduction, high-pass, EQ, compression, de-esser, limiter
3. Create a /raw folder convention for every project and never process the original file
4. Install Youlean Loudness Meter (free) as a VST/AU plugin and add it to the end of your master bus chain
5. Process a real recording using only the techniques from this course and document every setting in the EQ and Dynamics Chain Settings worksheet
6. A/B every processing stage against the previous step at matched loudness — make this a habit before it becomes instinctive
7. Deliver your first processed file and measure the LUFS and true peak on the export — fill in the Delivery QC Sheet completely
8. Review the Noise Reduction Processing Log after five projects to identify your optimal default settings by recording type
9. Build a client delivery template folder: /raw, /working-session, /exports, /archive-master, processing-log.txt
10. Practice the sweep-and-cut EQ technique on three different voice recordings to build your frequency recognition instinct