

SØRAV MUSIC ACADEMY

LEVEL 5 · RECORDING & PRODUCTION

A practical guide to preparing sessions, choosing and positioning microphones, recording clean takes, editing performances, using MIDI, managing latency and delivering reliable projects.

How to use this guide

Work through the lessons in order. Use your own voice or instrument as the source, and keep a written record of input settings, room conditions, edit choices and export checks. Technical settings vary by source and hardware; use the lesson principles to make decisions and verify them by listening.

Lesson 1: Planning a Recording Session

Learning objective: Prepare a session so recording time is focused, technically safe and easy to edit.

Define the outcome

Before opening the DAW, clarify the song section, performer, arrangement, target takes, deadline and delivery needs. A short session plan reduces interruptions and helps everyone share the same expectation.

Prepare the room and signal path

Check microphone, stand, cable, pop filter, headphones, interface inputs and monitoring. Keep the performer comfortable, minimise avoidable noise and secure cables so they do not pull on equipment.

Create a session template

In Logic Pro, set project tempo, meter and sample rate intentionally, create named tracks, choose sensible input assignments and prepare a click or guide track if useful. Save the project before recording.

Set up backups and file organisation

Use a clear project folder and predictable naming for takes and versions. Save to a drive with adequate free space, and make a second copy of important sessions or recordings to a separate location.

Communicate the workflow

Explain how takes will be named, when playback will happen, how punch-ins work and what feedback the performer should give. A calm, repeatable process helps performances.

Session preparation

Brief → Template → Routing check → Soundcheck → Record → Backup

A repeatable checklist catches preventable issues before the performance.

Logic Pro practical

Create a Logic Pro template for a singer: lead vocal, doubles, harmonies, guide track and reference track. Name inputs, set tempo/meter, choose a project location, save, close and reopen it to confirm the session is intact.

Listening exercise

Before recording, listen to the room and signal path with the mic open at a safe gain. Identify computer fan noise, reflections, hum, plosives and headphone bleed.

Common mistakes

- Starting to record before checking input routing.
- Saving all projects to a nearly full system drive.
- Using vague take names like final-final-new.
- Changing the performer setup between takes without noting it.

Completion task

Submit a session-prep checklist and a saved/reopened Logic Pro template with named tracks and a verified backup.

Lesson 2: Microphones and Polar Patterns

Learning objective: Choose and position microphones with an understanding of sensitivity, directionality, distance and room sound.

Dynamic and condenser microphones

Microphone type affects sensitivity, transient response, handling and powering needs, but neither type is automatically best for every source. Use the mic that suits the performer, source, room and desired tone.

Polar patterns

An omnidirectional mic captures sound from many directions; cardioid is more sensitive to the front and rejects more from the rear; figure-eight captures front and rear while rejecting the sides. Real pattern behaviour varies with frequency.

Distance and proximity effect

Moving a directional microphone closer often increases bass through proximity effect. Distance also changes the ratio of direct sound to room reflections and can change plosives, sibilance and performance consistency.

Off-axis response

Turning the mic slightly off-axis can reduce harshness or plosives, but the tonal result depends on the microphone. Aim the rear rejection of a directional mic toward the dominant unwanted noise where practical.

Use listening, not labels

Mic specifications are useful, but test placement and listen through headphones. A different position can solve a problem more cleanly than heavy EQ later.

Polar pattern overview

Omni: all around | Cardioid: front focus, rear rejection | Figure-eight: front + rear, side rejection

Actual microphone response varies with frequency and model.

Logic Pro practical

Record the same short vocal phrase at three safe distances using one mic and fixed preamp settings. Then record a second set slightly off-axis. Label each take and compare tone, room sound and plosives at matched playback level.

Listening exercise

Compare close and distant takes. Listen for low-frequency proximity effect, room reflections, consonant clarity and changes in vocal level due to movement.

Common mistakes

- Assuming condenser always means better.
- Ignoring the microphone's rear rejection direction.
- Moving distance between takes unintentionally.
- Using a polar-pattern diagram as a substitute for testing the actual mic.

Completion task

Create a microphone placement log with source, distance, angle, pattern, room observations and a reasoned choice for the best take.

Lesson 3: Gain Staging and Input Levels

Learning objective: Set healthy recording levels without clipping while preserving a useful signal-to-noise ratio.

Input gain is not mix loudness

The interface preamp controls the level before conversion. Track faders and plugin output controls act at later points. Lowering a fader cannot undo clipping already captured at the input.

Leave headroom

Digital recording does not need to approach 0 dBFS. Leave margin for performance peaks; exact target depends on source and workflow. Consistent clean takes are more valuable than a high meter reading.

Peak versus average

A vocal may have brief peaks much higher than its average level. Set gain using the loudest expected phrase, not only a quiet line. Check several takes and ask the performer to sing at realistic intensity.

Noise floor and room

Very low recording levels can make room noise more noticeable after large boosts, but increasing gain until near full scale is not the solution. Improve source level, mic placement and room conditions first.

Record clean, process later

Avoid clipping at the preamp, converter or any hardware insert. If monitoring with effects, keep the recorded source clean unless printing the effect is an intentional decision.

Recording signal path

Source → Mic/DI → Preamp → Converter → Logic Pro track → Processing → Output

Prevent overload at each stage; a later fader cannot undo earlier clipping.

Logic Pro practical

Record the loudest expected phrase and watch Logic Pro's input meter. Adjust the interface gain so peaks remain safely below 0 dBFS, then record a quiet phrase and listen for room noise. Do not use the track fader as a substitute for input gain.

Listening exercise

Compare a clean take and an intentionally clipped demonstration at matched playback loudness. Listen for flattened transients, grit and distortion that remain even after the file is turned down.

Common mistakes

- Recording as close to 0 dBFS as possible by habit.
- Ignoring loudest phrases and ad-libs.
- Thinking a lower track fader fixes clipped audio.
- Boosting a noisy recording without addressing the source.

Completion task

Submit a screenshot or notes showing input setup, loudest peak reading, room-noise check and why the chosen gain leaves adequate margin.

Lesson 4: Recording Vocals: Technique and Performance

Learning objective: Capture clear, consistent vocal performances by controlling posture, distance, phrasing, monitoring and communication.

Comfort and repeatability

Set stand height and headphone level before the take. The performer should be able to breathe naturally and deliver the phrase without fighting the setup. Mark foot position and mic distance if consistency matters.

Distance, angle and plosives

A pop filter helps control plosives but does not replace technique. A small angle change or consistent distance can reduce bursts of air. Avoid extreme movement that changes tone and level unpredictably.

Headphone mix

Give the performer a comfortable cue mix with enough vocal and useful accompaniment. Excessively loud headphones can cause fatigue and bleed. Ask for feedback and make the mix support performance rather than impress the engineer.

Takes and comping

Record complete passes when possible and note strong sections. Comping selects the best phrases from multiple takes; preserve source takes and crossfade edits to avoid clicks or unnatural changes.

Performance before processing

A well-delivered take often needs less correction. Prioritise timing, pitch, emotion, diction and consistency before reaching for plugins.

Vocal capture workflow

Comfort → Cue mix → Test phrase → Full takes → Comp → Edit fades → Review
Performance and consistency come before corrective processing.

Logic Pro practical

Record three full vocal passes in Logic Pro, name them clearly, mark the best phrases, then build a comp on a separate lane or track while preserving original takes. Audition every edit in context and add crossfades where needed.

Listening exercise

Compare takes without looking at their names. Choose based on emotion, diction, pitch, timing, noise and consistency—not just loudness.

Common mistakes

- Stopping after every small error instead of capturing a full pass.
- Comping words without listening across edit boundaries.
- Giving the singer an uncomfortable cue mix.
- Deleting source takes after comping.

Completion task

Create a labelled three-take vocal comp with preserved originals, edit notes and a short explanation of why each selected phrase works.

Lesson 5: Recording Instruments and DI Sources

Learning objective: Capture instruments and direct signals cleanly while understanding source level, impedance, bleed and performance consistency.

Microphone versus direct input

Acoustic sources are often captured with microphones; electric instruments may be recorded through a suitable DI or instrument input. A DI can provide a clean, re-ampable signal, but it is not a universal replacement for an amp or microphone.

Instrument inputs and line inputs

Instrument-level signals from passive pickups can require a high-impedance input. Line inputs expect a different nominal level. Use the interface's appropriate input mode and avoid accidental overload.

Amp and acoustic placement

Mic position changes tone and room contribution. For guitar amps, small movements across the speaker can alter brightness. For acoustic instruments, listen for balanced tone and avoid placing the mic where one resonance dominates.

Phase and multi-mic recording

When capturing one source with multiple microphones, timing and polarity relationships can affect the combined sound. Check the microphones together in mono and investigate hollow or weakened tone.

Performance and noise

Cable handling, fret noise, pedal noise, room reflections and inconsistent playing can all affect the result. Fix what is practical at the source before editing or processing.

Instrument capture choices

Instrument → DI / Instrument input → Clean editable signal
Amp → Mic placement → Mic preamp → Audio track
DI and mic signals can complement one another; check phase and tone together.

Logic Pro practical

Record an electric guitar DI through the correct instrument input and, if available, a separate amp/mic signal. Label both, check peaks and listen together. Compare polarity and timing relationships without assuming a polarity flip is always the solution.

Listening exercise

Compare a DI, amp-mic and blended version at similar loudness. Listen for attack, body, noise, phase changes and whether the blend adds useful tone.

Common mistakes

- Using a line input for a source that needs instrument impedance.
- Clipping the DI or amp preamp unintentionally.
- Moving the amp mic without documenting it.
- Flipping polarity automatically without listening.

Completion task

Deliver labelled DI and/or microphone takes, peak notes, input settings and a short comparison of their tone and phase relationship.

Lesson 6: Editing, Comping and Crossfades

Learning objective: Edit recorded performances while preserving natural timing, sound continuity and musical expression.

Edit the performance, not the waveform alone

Use the arrangement and phrasing to decide where edits belong. A visually neat edit can still sound unnatural if it cuts a breath, consonant, sustain or instrument decay.

Comping workflow

Keep original takes. Select phrases from alternate takes and use clear lane/track names. Choose consistent tone, timing and emotional delivery, not only the technically cleanest word.

Crossfades

Crossfades overlap or blend adjacent regions to reduce clicks and abrupt changes. Their length depends on the material: too short may click; too long can create phasey overlaps or change timing.

Timing edits

Correct only the timing issues that distract from the performance. Over-editing can remove groove or produce unnatural transients. For rhythmic instruments, edit in relation to the musical context and intended feel.

Noise and breaths

Decide which breaths, room tones and handling noises should remain. Edit with context and use fades; removing every breath can make a vocal unnatural. Avoid abrupt cuts that expose noise changes.

Comping and edit continuity

Preserve takes → Choose phrases → Crossfade edits → Listen in context → Final review

Use ears to check clicks, breaths, room tone and timing—not only waveform appearance.

Logic Pro practical

In Logic Pro, duplicate or preserve the original playlist/track, comp a vocal from three takes, add crossfades at edits and listen through the whole phrase. Then edit one rhythmic instrument transient and compare before/after in context.

Listening exercise

Audition edits with eyes closed. Listen for clicks, sudden room-tone changes, missing breaths, unnatural consonants, timing shifts and altered groove.

Common mistakes

- Editing by waveform appearance alone.
- Deleting alternate takes too early.
- Using identical crossfade lengths for every source.
- Removing every breath or transient regardless of musical purpose.

Completion task

Submit an edited phrase with original takes preserved, crossfades applied and an edit log explaining each significant change.

Lesson 7: MIDI, Virtual Instruments and Programming

Learning objective: Use MIDI and virtual instruments to create editable performances while distinguishing note data from audio.

MIDI is performance data

MIDI regions contain note and controller information such as pitch, start time, duration, velocity and modulation. MIDI itself is not an audio recording; a software instrument turns the data into sound.

Instrument tracks and routing

In Logic Pro, a Software Instrument track hosts a virtual instrument. MIDI regions trigger the instrument, whose audio output can be processed and routed. Audio tracks instead play recorded or imported sound.

Velocity and articulation

Velocity may affect volume, timbre or sample layers depending on the instrument. Articulation controls can change how a note is played. Vary these intentionally so programmed parts do not sound mechanically identical.

Quantisation and human feel

Quantisation can correct timing or establish a grid, but strength, swing and selective edits often preserve a more natural performance. Groove depends on timing, accents, duration and sound choice.

Print or keep MIDI editable

Keep the MIDI and instrument settings for revision. Bounce or print audio when needed for compatibility, CPU relief or delivery, and label the printed version clearly.

MIDI versus audio

MIDI notes + timing + velocity → Software instrument → Audio output → Optional audio print

Keep the editable MIDI and instrument setup when future revision matters.

Logic Pro practical

Create a Logic Pro Software Instrument track, program an 8-bar chord progression and melody, vary velocity and note lengths, then bounce a copy to audio while preserving the MIDI region and instrument settings.

Listening exercise

Compare a part with uniform velocity and timing to a version with purposeful accents, varied note lengths and subtle timing changes. Listen for musicality, not random variation.

Common mistakes

- Thinking MIDI is the sound file itself.
- Using one velocity for every note without checking articulation.
- Quantising every note to the strongest grid by default.
- Printing audio and deleting the editable source.

Completion task

Deliver a labelled MIDI region and corresponding audio print, with notes on velocity, quantisation and the reason for printing.

Lesson 8: Arrangement, Layers and Session Organisation

Learning objective: Build a clear session structure that supports musical decisions, collaboration and later revisions.

Arrange by function

Group tracks by roles such as drums, bass, harmony, lead, vocals and effects. Clear roles make it easier to hear conflicts and mute or revise a layer without losing the whole arrangement.

Track naming and colour

Use names that identify source and role, such as Lead Vox Main, Vocal Double L or Guitar DI. Colour can help navigation, but names and folder structure should carry the real information.

Track stacks and buses

Logic Pro track stacks can organise related tracks; summing stacks can route groups through shared processing. Understand where signal flows before adding bus effects or automation.

Markers and versions

Use arrangement markers, bar references and version notes. Save important revisions separately or use project alternatives where appropriate. Avoid vague filenames and keep a recoverable source.

Prepare for handoff

A session should make sense to another engineer: tracks named, unused material handled intentionally, routing clear, plugins and audio files available, and a note explaining any missing assets or special settings.

Session organisation

Tracks by role → Clear names → Groups / buses → Section markers → Version notes → Handoff
Clear naming and routing help you and collaborators revise the session safely.

Logic Pro practical

Organise a practice session into Drums, Bass, Music, Lead, Vocals and FX groups. Add markers for verse/chorus/bridge, name tracks consistently, create a notes track and save a dated version before major changes.

Listening exercise

Mute groups one at a time to understand their role. Listen for layers that duplicate a function, mask the lead or appear only because they are soloed.

Common mistakes

- Relying on colour instead of track names.
- Creating buses without understanding routing.
- Leaving multiple ambiguous versions in the same folder.
- Deleting tracks that may be needed for a revision.

Completion task

Submit a clearly named and grouped Logic Pro session with markers, version notes, working routing and a handoff checklist.

Lesson 9: Latency, Monitoring and Recording Workflow

Learning objective: Understand monitoring paths, buffer settings and latency trade-offs so performers hear themselves comfortably while recording.

What latency is

Latency is the delay between an input event and what you hear from a monitored path. Converter, buffer and plugin processing can all contribute. Some delay is unavoidable, but the monitoring path can be designed to minimise it.

Buffer size trade-offs

Smaller audio buffers often reduce software monitoring latency but increase CPU load and the chance of clicks or dropouts. Larger buffers can be useful for mixing or heavy sessions. The appropriate setting depends on the computer, interface and plugin chain.

Direct monitoring

Some interfaces provide direct monitoring that routes input to headphones without the full DAW round trip. This can feel immediate, but avoid accidentally hearing both direct and delayed software-monitoring paths together.

Low Latency Mode and plugins

Logic Pro's Low Latency Mode can bypass or alter latency-inducing plug-ins in the monitored path. Check which effects are disabled and whether the sound changes. Avoid assuming the mode makes every setup latency-free.

Reliable recording setup

Close unnecessary CPU-heavy apps, use a sensible buffer, check interface routing and record a short test. Keep the monitoring sound comfortable; do not compromise hearing safety to overcome latency.

Monitoring paths

Input → Direct monitor → Headphones
Input → DAW buffer + plugins → Software monitor → Headphones
Avoid hearing both paths unintentionally; smaller buffers can increase CPU load.

Logic Pro practical

Record a short vocal with software monitoring, then test a lower I/O buffer and Logic Pro Low Latency Mode if available. Compare feel and CPU stability. If your interface offers direct monitoring, test it separately and avoid monitoring the same signal twice.

Listening exercise

Listen for doubled or comb-filtered monitoring, clicks, dropouts and delay between the live voice and headphones. Identify whether the issue is routing, buffer load or a plugin in the monitored path.

Common mistakes

- Using the smallest buffer even when the session becomes unstable.
- Monitoring both direct and delayed signals unintentionally.
- Assuming every plugin has negligible latency.
- Turning up headphones excessively to mask a monitoring problem.

Completion task

Record your interface, buffer setting, monitoring path, observed latency symptoms and the configuration that gave a stable performance.

Lesson 10: Exporting, Backups and Session Handoff

Learning objective: Deliver clean audio and an organised session that can be reopened, checked and revised reliably.

Choose the correct deliverable

Confirm whether the recipient needs a stereo mix, stems, individual tracks, MIDI, a full project or a combination. Agree file format, sample rate, bit depth, naming, start/end points and whether processing should be printed.

Export from the right range

Check cycle or selection boundaries, count-in and tail, fades, automation and whether muted or soloed tracks affect the export. Export a test if the session is complex.

Verify the rendered file

Re-import or open the exported file, listen from beginning to end and check duration, channel count, unwanted clicks, missing tracks, clipping and fades. A successful export dialog does not prove the file is correct.

Backups and portability

Keep a primary project and a second copy in a separate location. Use Logic Pro's project consolidation or asset-collection options when appropriate so audio files are not missing on another machine.

Handoff notes

Include version, date, settings, known limitations, tempo/key if relevant, stem names and any effects intentionally printed. Keep a clean editable source separate from final deliverables.

Reliable handoff

Confirm brief → Export → Re-import → Listen full file → Check settings → Backup project + assets
Verify the actual render and make sure the project can reopen with its media.

Logic Pro practical

Export a stereo WAV from Logic Pro, re-import it into a new track and listen through. Then create a copy of the project with required assets included, move or copy it to a separate folder/drive and reopen it to confirm portability.

Listening exercise

Check the exported file from start to end, including silence before the first sound and the final reverb/delay tail. Compare it to the session playback and note any difference.

Common mistakes

- Assuming the export is correct because the dialog finished.
- Exporting only the cycle range by accident.
- Sending a project that references audio files outside its folder.
- Overwriting the only approved version.

Completion task

Submit a verified stereo export, organised project copy, backup location and concise handoff note listing all settings and included files.