

PRO TOOLS

VOCAL RECORDING

SESSION HANDBOOK



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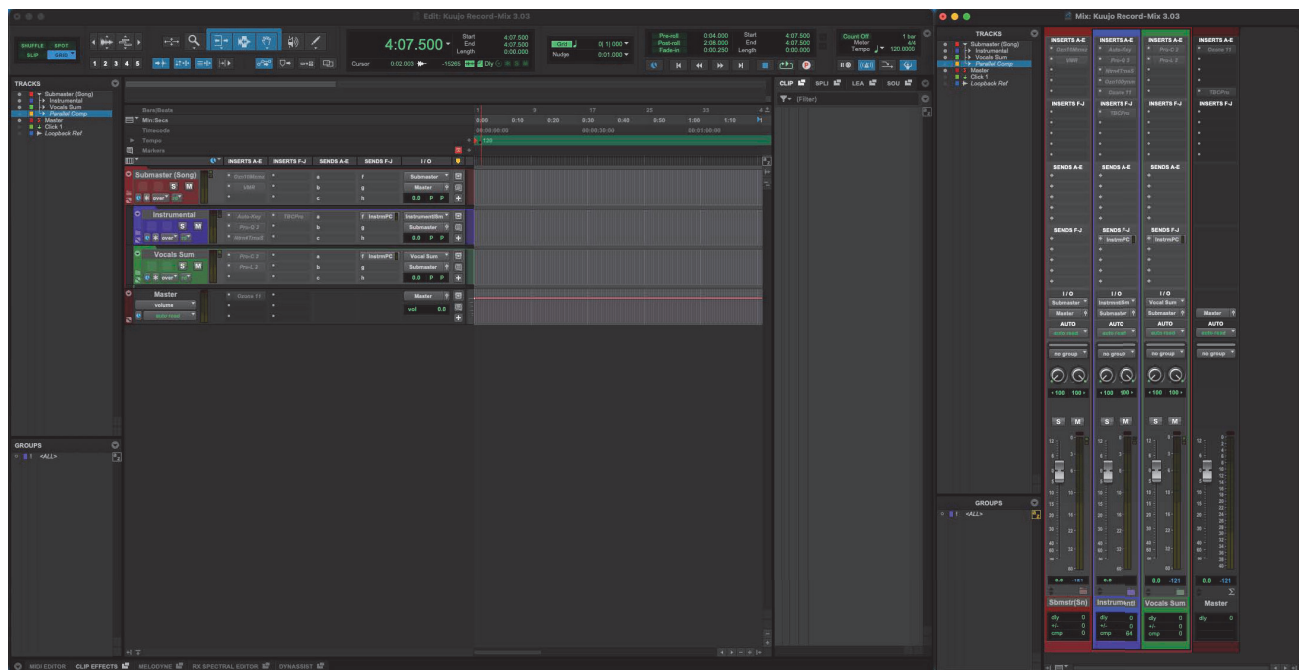
PRO TOOLS

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FIELD GUIDE

A practical, repeatable workflow for clean vocal capture, artist monitoring, session setup, and efficient take management.



Pro Tools reference view

Prepared by Kuujo

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Session roadmap

Follow the sections in order during setup, then use the final two pages as an at-a-glance checklist during live sessions.

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|----|---|
| 01 | SIGNAL CHAIN
Microphone power, gain staging, and optional hardware compression |
| 02 | SESSION CONFIGURATION
Playback engine, sample rate, bit depth, input routing, and imports |
| 03 | TEMPO & PITCH
BPM, musical key, Auto-Key, Auto-Tune, and low-latency operation |
| 04 | RECORDING WORKFLOW
Pre/post-roll, QuickPunch, playlists, and input monitoring |
| 05 | ARTIST MONITORING
Headphone balance, ambience effects, and dynamic control |
| 06 | QUICK REFERENCE
Pre-record checklist and essential keyboard shortcuts |

OPERATING PRINCIPLE

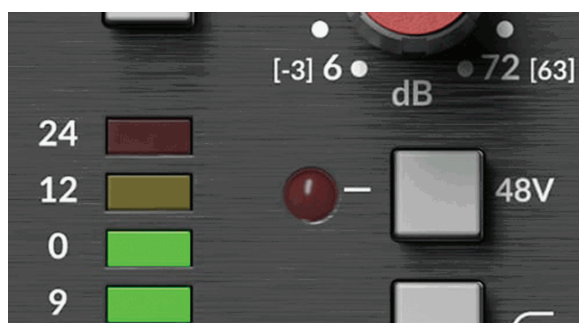
Protect the recording first: preserve headroom, verify routing, and keep the artist comfortable. Speed matters only after signal integrity is confirmed.

Build a clean input path

Before opening the session, confirm the microphone, power requirements, preamp level, and any processing placed before the converter.

1. Microphone power

- Confirm the microphone type before enabling phantom power.
- Solid-state condenser: typically requires +48 V phantom power.
- Tube condenser: normally uses its dedicated external power supply; do not apply +48 V unless the manufacturer explicitly permits it.
- Dynamic: typically does not require phantom power. Confirm requirements for active dynamics and inline gain devices.



Phantom-power (+48 V) control

SAFETY

Mute monitors, lower preamp gain, and connect the microphone before engaging phantom power. Always follow the manufacturer's documentation.

2. Input gain

Set the preamp for a strong signal without overloading the analog input or A/D converter. Judge gain using the loudest expected part of the performance—not a quiet rehearsal phrase.

SETTING	RECOMMENDED STARTING POINT
Target	Aim for healthy peaks with comfortable headroom; approximately 60–80% of the meter is a practical visual reference.
Avoid	Sustained yellow and any red/clipping indication.
Verify	Listen for distortion, noise, crackle, hum, and cable movement before recording.

METER CHECK

Use the input meter to confirm headroom, then listen on headphones and monitors for distortion that a meter may not reveal.

Control dynamics without overprocessing

3. Hardware compression (optional)

Compression recorded on the way in cannot be undone. Use conservative settings, listen to the result, and bypass the processor if it does not clearly improve capture consistency.

SETTING	RECOMMENDED STARTING POINT
Ratio	4:1
Attack	Medium-fast
Release	Medium; slightly slower than the attack
Threshold	Set for moderate gain reduction on louder passages
Makeup/output	Return the processed signal to a healthy level without clipping the converter

- Smooth peaks while preserving expression and consonant detail.
- Avoid audible pumping, dull transients, or a noticeably flattened performance.
- Re-check output level after changing threshold, ratio, attack, or release.



Gain-reduction meter reference

LISTEN FIRST

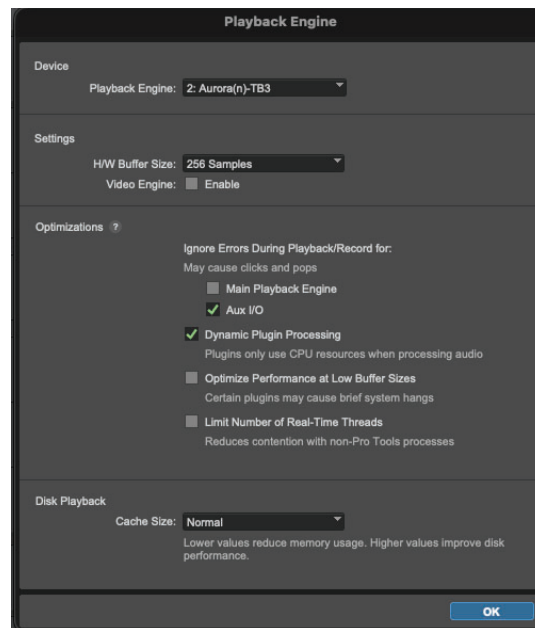
A meter confirms activity; it does not confirm musicality. Compare bypassed and processed signals at similar loudness.

Configure Pro Tools

Establish the technical format and routing before importing audio or recording a take.

1. Select the audio interface

1. Open the Playback Engine settings.
2. Select the intended audio interface.
3. Confirm the device is online and its I/O is available.
4. Use the lowest stable buffer appropriate for the session and plug-in load.



Playback Engine window

2. Sample rate and bit depth

SETTING	RECOMMENDED STARTING POINT
Sample rate	48 kHz unless the client, delivery specification, or existing session requires another rate.
Bit depth	32-bit float when supported by the session workflow; otherwise follow project specifications.

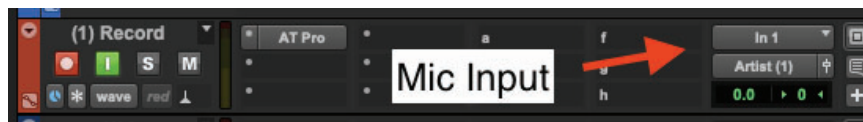
IMPORTANT TECHNICAL NOTE

32-bit float provides extensive digital headroom for internal processing and file handling, but it cannot repair clipping that already occurred in the microphone preamp or A/D converter. Proper analog gain staging remains essential.

Route and import audio

3. Verify the microphone input

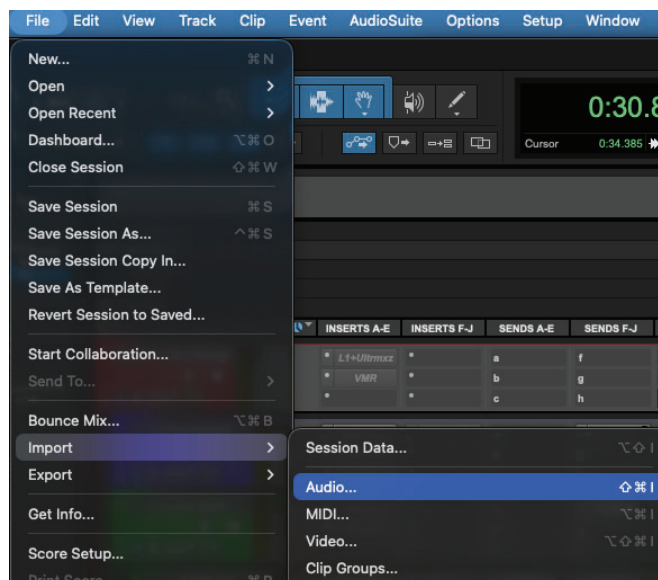
- Identify the physical input used on the interface.
- Assign that same input to the vocal record track.
- Record-enable or input-monitor the track and confirm signal presence.
- Check that the intended mono input—not a stereo pair or bus—is selected.



Track input selector

4. Import the instrumental

- Import a stereo instrumental (2-track) or the supplied individual stems.
- When using the Kuujo Recording Template, place audio in the designated routing folders.
- Confirm the import does not change the intended sample rate, timing, or song start position.
- Name imported tracks clearly and color-code them consistently.



Pro Tools import workflow

CHECKPOINT

Play the instrumental from the intended start location. Confirm both channels, routing, tempo reference, and master level before building the artist mix.

Determine tempo and musical key

Use analysis tools as a starting point, then confirm their results against the music.

Tempo (BPM)

1. Analyze a section with a clear rhythmic groove.
2. Enter or confirm the detected tempo in Pro Tools.
3. Zoom in and verify that major waveform transients align with the grid.
4. If alignment drifts, tap the tempo or correct the tempo map before recording.

Musical key

1. Analyze a sustained chord or melodic passage with minimal percussion.
2. Audition the result and check for relative major/minor ambiguity.
3. When appropriate, use Send to Auto-Tune to transfer the detected key and scale.
4. Deactivate or remove Auto-Key after transfer to conserve CPU resources.
5. Enable Use Low Latency in Auto-Tune while tracking.



Auto-Key analysis and transfer controls

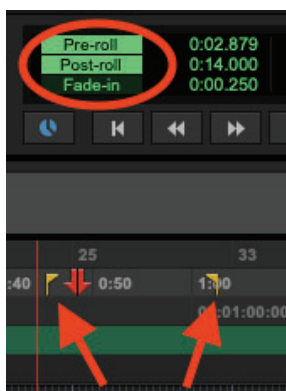
VERIFY BY EAR

Auto-Key is a useful reference, not final authority. Confirm the tonal center and scale against the full arrangement and the vocalist's melody.

Prepare for fast, recoverable takes

1. Set pre-roll and post-roll

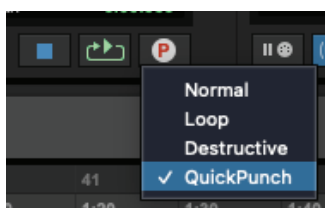
SETTING	RECOMMENDED STARTING POINT
Pre-roll	Start with 1–2 bars so the artist can enter naturally.
Post-roll	Continue several beats—or to the end of the song—when the performance needs a natural release.



Pre-roll and post-roll controls

2. Enable QuickPunch

- Right-click the Record button and select QuickPunch.
- Arm the intended track and verify the red record indication.
- QuickPunch maintains recoverable audio around punch points while playback continues, subject to the configured preferences and available disk space.



QuickPunch selection

PRACTICE FIRST

Run one rehearsal punch before the artist's keeper take. Confirm the punch, pre-roll, monitoring transition, and recovered audio.

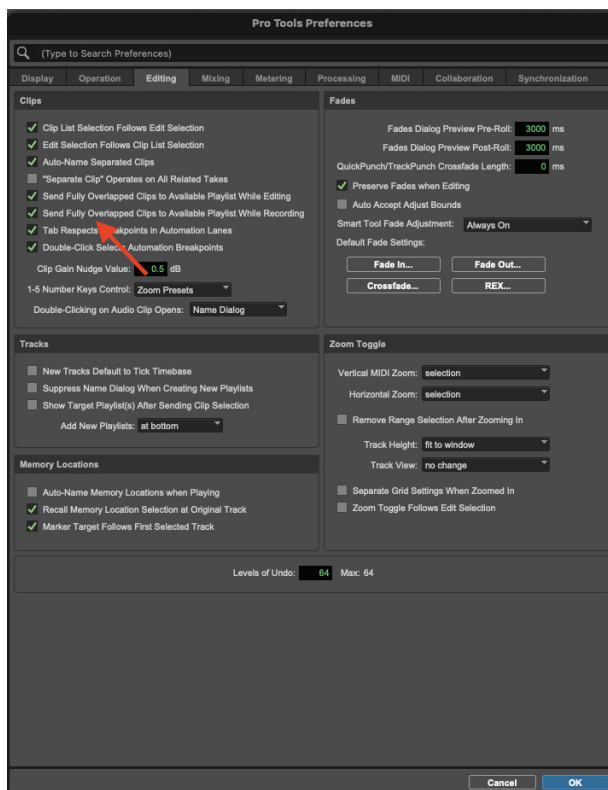
Organize takes automatically

3. Enable automatic playlist creation

Navigate to Setup → Preferences → Editing. Under Clips, enable:

- Send Fully Overlapped Clips to Available Playlist While Editing
- Send Fully Overlapped Clips to Available Playlist While Recording

These settings move alternate full-overlap takes to available playlists, keeping the main track lane clean and making comping faster.



Editing preferences for playlist management

4. Enable input monitoring

- Click the I icon next to Record Enable on the vocal track.
- Confirm the artist hears the live input through the intended monitoring path.
- Check latency, polarity, cue level, and effect returns before recording.



Input-monitoring control

ROUTING CAUTION

Avoid monitoring the same input through both direct hardware monitoring and Pro Tools unless the workflow is intentionally configured that way; duplicate paths can create comb filtering or an echo.

Build a confident headphone mix

The cue mix should feel exciting and clear without changing the level being recorded.

Balance the cue

- Set the vocal comfortably above—or inside—the instrumental according to the artist's preference.
- Use a dedicated artist bus or cue path when available.
- If a limiter is used on the cue bus, treat it as monitoring-only protection and keep the recorded vocal path clean.
- Reduce the submaster or cue master if the monitoring chain approaches clipping.

Delay and reverb

- Adjust ambience in real time to support confidence and pitch.
- Keep effects low enough that timing, diction, and pitch remain easy to judge.
- Verify that effect returns are not being printed unless the session calls for committed effects.



Artist bus and cue-processing example

SEPARATE CAPTURE FROM COMFORT

The cue mix can be loud, polished, and inspiring while the recorded signal remains clean, dry, and safely below clipping.

Manage wide dynamics in real time

Real-time dynamic control

Some vocalists move between whispers and powerful belts. Anticipate the loud sections and preserve headroom before the take begins.

- Ask the vocalist to rehearse the loudest phrase during sound check.
- Keep the recording path stable whenever possible; frequent changes can make takes harder to match.
- If riding a monitoring output, use small, smooth adjustments and do not confuse cue level with recorded level.
- If the preamp or converter is at risk of clipping, stop and reduce input gain—the clipped transient cannot be recovered later.
- Document intentional hardware settings so they can be recalled.

ENGINEER
PRIORITY

Do not chase meter consistency at the expense of the performance. Preserve clean capture, make the artist comfortable, and leave detailed level shaping for the mix.

Before the first keeper take

SETTING	RECOMMENDED STARTING POINT
Signal	Clean, correctly routed, and safely below clipping
Session	Saved, named, and configured to project specifications
Workflow	QuickPunch, playlists, pre/post-roll, and input monitoring verified
Artist	Cue balance, latency, talkback, and effects approved

Pre-record checklist

Use this page at the start of every vocal session. Initial each item or mark it complete before recording.

☐ Correct microphone selected	☐ Microphone power requirement verified
☐ Cable, stand, shock mount, and pop filter secure	☐ Correct interface input and Pro Tools input assigned
☐ Signal clean; no clipping, hum, crackle, or noise	☐ Hardware compression conservative and verified (if used)
☐ Sample rate and bit depth match project specifications	☐ Instrumental or stems imported and routed
☐ BPM confirmed; grid aligned to transients	☐ Musical key and scale confirmed
☐ Auto-Tune low-latency mode enabled (if used)	☐ Pre-roll and post-roll configured
☐ QuickPunch enabled and tested	☐ Automatic playlist preferences enabled
☐ Input monitoring and cue path verified	☐ Headphone mix balanced; latency acceptable
☐ Delay and reverb tailored to the artist	☐ Record track armed and session saved

FINAL VERBAL CHECK

“You can hear yourself clearly, the level feels good, and the effects feel right?” Get the artist’s confirmation before the first keeper take.

Essential shortcuts

Confirm that Keyboard Focus (the A-Z button) is enabled in the upper-right of the Edit window when using single-key editing commands.

FUNCTION	macOS	WINDOWS
Toggle Pre/Post Roll	Command + K	Ctrl + K
Start Recording	Control + Space or 3 (numeric keypad)	Ctrl + Space or 3 (numeric keypad)
Set Pre/Post Roll Marker	Option + Click	Alt + Click
Send Clip to Playlist	Control + \	Ctrl + \

Keyboard Focus mode

When the A-Z indicator is active, Pro Tools single-key commands provide faster editing and navigation. Turn it off when typing into fields or when a shortcut could trigger an unintended edit.



A-Z Keyboard Focus indicator

SESSION CLOSE

Save, verify the session folder, confirm recorded files are present, create the required backup, and communicate the file-delivery plan before anyone leaves.