THE COMPLETE WORKFLOW

VOCAL MIXING

CHECKLIST

01	02	03	04	05	06	07
PROJECT	EDITING	TUNING	GAIN	PROCESS I	PROCESS II	PROCESS III

Print it out. Tape it to your studio wall.
Focus on the art, let the cheat sheet handle the science.

© MANDALAZMUSIC · V2.0

1 Create Project

SESSION SETUP & ORGANIZATION

- [ ] **Naming Convention**
  Date — Artist — Title — Revision (e.g. 2026-03-28_Artist_SongName_V1)
- [ ] **Import & Color Code**
  Import all stems, name tracks: Lead Vox | Dbl L | Dbl R | Ad-lib | Harm Hi
- [ ] **Bus Routing**
  Group vocals to a Vox Bus — route ad-libs, doubles, harmonies to sub-buses

2 Editing

CLEANUP & PREPARATION

- [ ] **Comping**
  Choose best takes, time-align doubles to lead — check phase with mono button
- [ ] **Clearing & Noise Removal**
  Remove room noise, breaths between phrases — keep natural breaths at -15 to -20 dB
- [ ] **Crossfades**
  Apply 5-10 ms crossfades at every edit point to prevent clicks
- [ ] **De-Noise & De-Click**
  iZotope RX: Mouth De-click for lip noise, Spectral De-noise for room tone

3 Tuning

PITCH CORRECTION

- [ ] **Melodyne (Offline)**
  Detailed pitch + timing — best for natural correction, adjust drift not every note
- [ ] **Auto-Tune / Waves Tune**
  Real-time correction — retune speed per genre: fast = trap, slow = R&B

4 Gain Staging

VU METERING ON MASTER

- [ ] **Beat Level**
  Set instrumental to -6 dB peak — leave headroom for vocals
- [ ] **Vocal Levels**
  Each vocal track averaging -18 dBFS (RMS) — optimal for plugin processing
- [ ] **Volume Automation**
  Waves Vocal Rider or manual clip gain — even out performance before plugins

PRO TIPS

Always gain stage before adding any processing plugins.
Use RX 7 Mouth De-click for subtle click artifacts that gates miss.
Aim for -18 dBFS average — optimal input level for analog-modeled plugins.
Name tracks consistently: Lead Vox | Ad-lib L | Dbl R | Harm Hi
Check phase in mono after time-aligning doubles — flip polarity to test.

5 Processing — Signal Chain

CORE INSERT PROCESSING · ORDER MATTERS

- [ ] **01 Surgical EQ**
  Cut problem frequencies — HPF at 80-100 Hz, notch resonances · subtractive only
- [ ] **02 Compressor**
  Control dynamics: 3-6 dB GR, fast attack for rap, slow for singing · VMR, C2, 1176
- [ ] **03 De-Esser**
  Target sibilance 4-8 kHz — split-band mode, don't over-process · FabFilter DS
- [ ] **04 Tonal EQ**
  Additive color: presence 3-5 kHz, air 10 kHz+, warmth 200-300 Hz · broad Q boosts
- [ ] **05 Tonal Compressor**
  Character compression: CLA-2A smooth, CLA-76 aggressive · 2-4 dB GR
- [ ] **06 Saturation**
  Harmonic richness — subtle warmth or aggressive edge · Saturn, Decapitator
- [ ] **07 Limiter / Clipper**
  Catch remaining peaks, protect bus headroom — transparent, not squashing

SIGNAL FLOW TOP TO BOTTOM · PROCESS IN THIS ORDER

SIGNAL CHAIN TIPS

Always cut before you boost — surgical EQ first, tonal EQ later.
Compress in stages: 3 dB on insert + 3 dB on bus beats 6 dB on one compressor.
De-ess before tonal EQ — boosting presence will amplify sibilance.
Saturation replaces EQ boosts: add harmonics instead of shelf boosts.
A/B your chain regularly — bypass the whole chain to check you're improving.
Don't over-process: if it sounds good after 3 plugins, stop there.

6 Processing — Space & Depth

SEND FX & PARALLEL PROCESSING

- [ ] **Reverb**
  Short plate for upfront presence, hall for depth — always on a send, not insert
- [ ] **Delay**
  Slap 60-120 ms for doubles effect, ping pong for width — sync to BPM
- [ ] **Parallel Compression**
  Blend heavily compressed (CLA-2A, 10+ dB GR) under dry vocal for energy
- [ ] **Sidechain Compression**
  Duck reverb/delay against dry vocal with Pro-MB — keeps clarity in busy sections
- [ ] **Panning**
  Lead center, doubles L/R 50-80%, ad-libs wide 70-100% — check in mono
- [ ] **Creative FX**
  Chorus, flanger, distortion — automate in/out for transitions and ear candy

7 Processing — Creative & Polish

FINAL TOUCHES & PRODUCTION DETAILS

- [ ] **Routing**
  Effects on track inserts, processing on bus — bus chain: EQ + Comp + Limiter
- [ ] **Delay Throws**
  Automate send throws: formant shift, chorus, phone filter, hard pan L/R
- [ ] **Ear Candy**
  Risers, reverse vocals, impacts, white noise sweeps, foley — layer for transitions
- [ ] **Automation**
  Volume rides, filter sweeps, reverb sends, delay feedback — automate everything

GENRE-SPECIFIC FINALS

SINGER	More top end & shimmer — air shelf at 10-12 kHz, plate reverb, wider stereo
RAPPER	Upper mids 2-5 kHz for presence, tighter compression, minimal reverb, more delay
HOOK	Layer harmonies: +5th high / -octave low / pan L+R — separate reverb from verse

VOCAL EQ FREQUENCY GUIDE

20 - 80 Hz

LOW END: RUMBLE & BODY

High-pass filter is essential. Set HPF at 80-100 Hz for most vocals. Everything below is mic rumble, AC noise, and plosives. Roll off lower for deep bass voices.

150 - 500 Hz

SURGICAL CUTS: MUD & BOXINESS

Mud builds up around 250-400 Hz, clashing with guitars and clouding the mix. Use narrow Q cuts to surgically remove problems without killing vocal body.

500 Hz - 2 kHz

PRESENCE & CHARACTER

Boosting 1-2 kHz with wide EQ brings vocals forward, enhances clarity and aggression. Avoid overdoing 800 Hz-1.2 kHz — prevents nasal or honky tone. API 550B style works great.

2 - 5 kHz

THE CUT & BITE

Broad boost in 3-5 kHz adds articulation, bite, and presence. Critical for cutting through heavy instrumentals. Watch for harshness — follow with a de-esser to smooth s and t sounds.

5 - 10 kHz

THE AIR & SIZZLE

High-shelf boost around 8-10 kHz adds air, clarity, and pro-level polish. Try Maag EQ4 Air Band for subtle, musical high-end brilliance. Best on clean recordings.

10 kHz+

TAME THE FUZZ

Low-pass filter around 12-15 kHz tames harsh fizz in heavily processed vocals. Smooths the top end, reduces listening fatigue, makes vocals sound less digital and more natural.