

Slate Digital Mixing & Mastering Cheat Sheet

This cheat sheet summarizes common Slate Digital plugins used for mixing and mastering. It draws on official manuals and professional reviews to explain what each module emulates, how it sounds, and where it often fits in a signal chain. A suggested FL Studio (.fst) vocal chain is provided at the end.

1 General mixing workflow

Before inserting any plugin, **edit and automate your vocal or instrument**: remove breaths, comp multiple takes, and adjust clip gain so that the volume is consistent. Professional mixing guides note that a compressor cannot fix wildly inconsistent performances and recommend automating the clip gain before compression ¹. After balancing, follow this general order:

1. **Noise reduction & gating** – remove mouth clicks, breaths and background noise; in Slate's VMR you can use **FG-DS 902** (de-esser/gate) as the first processor.
2. **Preamp & saturation** – add analog tone and subtle harmonics; Slate's Virtual Tube Collection or Revival/Trimmer modules supply this.
3. **EQ** – perform surgical cuts to remove room resonances and rumble; then apply tonal EQ to shape the sound ². Use high-pass filters to remove low-end noise and cut muddiness around 200–500 Hz; boost presence (2–5 kHz) and air (> 10 kHz).
4. **Compression** – use 1–2 compressors. A fast FET or VCA type catches peaks, then a slower opto or vari-mu smooths dynamics ³. Typical settings for a levelling compressor: ratio ~3:1, attack 10–30 ms, release 50–100 ms, with 3–6 dB of gain reduction ⁴.
5. **De-esser** – tame sibilance between 5–10 kHz using FG-DS 902 or a dedicated de-esser.
6. **Effects** – add reverb (e.g., VerbSuite Classics, Lustrous Plates) and delay. Send these on auxiliary buses to maintain control over the dry/wet balance.

2 Virtual Mix Rack modules

Slate's **Virtual Mix Rack (VMR)** is a modular 500-series style host. The Pro Audio Files breakdown explains that it contains console emulations, preamps, EQs and compressors, each modelling specific hardware ⁵. Modules can be combined in any order.

2.1 Console & tube emulations

Module	Modeled after / tonal character	Typical use	Evidence
VCC – Virtual Console Collection	Six console emulations: Brit 4k E/G (SSL 4000E/G) offer tight low-end and punchy midrange; Brit N (Neve 8048) gives a rich, fat and warm sound; RC-Tube emulates a vintage RCA broadcast tube console with thick mid-range and smooth highs; Ψ (Trident 80B) offers a wide soundstage; US A models an API 1604 with mid-range punch ⁵ .	Place on each channel and the mix bus to impart console saturation and glue.	Pro Audio Files notes the tonal traits of each console emulation ⁵ .
VTC – Virtual Tube Collection	Three virtual tube circuits: London (vintage British consoles) adds big, warm low-mids; New York (solid-state discrete circuits) adds aggressive mid-range and tight low-end; Hollywood is the most colorful with airy highs and deep bottom ⁶ .	Use on preamps or mix bus to add tube character; you can select Drive and Tone to dial in saturation.	Pro Audio Files describes the tonal characteristics of each tube module ⁶ .
Revival	Not a direct hardware emulation; combines elements of tubes, tape and transformers. The Shimmer control adds depth, clarity and width while Thickness adds warmth and punch ⁷ .	Great for vocals, drums or mix bus to add air and body.	Pro Audio Files explains that Shimmer enhances high-end while Thickness adds low-end warmth ⁷ .

2.2 Preamps

Module	Modeled after / character	Application	Evidence
FG-73	Emulates the Neve 1073 preamp; bold, present, warm tone ⁸ .	Use on vocals, drums or bass to add classic Neve-style saturation.	Pro Audio Files lists the characteristics ⁸ .
FG-76	Models a Telefunken V76 tube preamp; thick, warm, colorful, great on bass and kick ⁹ .	Use when you need rich tube saturation and weight.	Same source ⁹ .

2.3 Equalizers

Module	Emulation / features	Use	Evidence
FG-N	Modeled after the Neve 1073 EQ. Offers rich harmonic saturation, lush and bold tone, and includes two mid bands for greater control ¹⁰ .	Good on vocals and drums when you need musical boosts or cuts.	Pro Audio Files describes its tonal qualities ¹⁰ .
FG-S	Based on the SSL 4000E console EQ. Delivers fat, punchy and musical tones ¹¹ .	A “workhorse” EQ for drums, guitars and general channel shaping.	Same source ¹¹ .
AirEQ Air & Earth	The Air band adds brightness without harshness; the Earth band adds deep, solid sub-frequencies ¹² .	Use Air to bring vocals forward and add breath; use Earth for tight, precise bass.	Pro Audio Files notes these characteristics ¹² .
Custom Series EQ / Lift	Uses custom algorithms that blend several classic curves; offers familiar analog tone ¹³ .	Quick, broad-stroke equalization; handy for tone-shaping.	Same source ¹³ .

2.4 Compressors

Module	Emulation / character	Use	Evidence
FG-116	Digital replica of UREI 1176 Rev D FET compressor; fat tone with musical transformers ¹⁴ . Switching circuits emulates “blue stripe” and other revisions to get different tonal flavors ¹⁵ .	Use for fast peak control on vocals, drums and bass. Shift-click attack knob to bypass compression and use just the transformer saturation.	Pro Audio Files describes the model and circuit variations ¹⁶ .
FG-401	Hybrid of the SSL 4000E channel compressor with influence from Distressor, dbx 160A and LA-2A; features two circuits—one punchy like a VCA, the other smooth like optical ¹⁷ .	Versatile compressor for vocals, drums and mix bus; choose Circuit 1 for aggressive VCA style, Circuit 2 for transparent optical-like compression.	Pro Audio Files explains the hybrid design ¹⁷ .

Module	Emulation / character	Use	Evidence
FG-116 Blue Series (Vintage/ Modern)	Additional 1176-style models: Vintage circuits replicate “blue stripe” units with fast attack and mid-forward tone, while the Modern circuit offers hi-fi, punchy and musical characteristics with less distortion ¹⁸ .	Great on vocals and drums when you need different 1176 flavors.	Same source.
The Monster	Emulates the famous “all buttons mode” of the 1176; used for extremely loud and exciting parallel compression ¹⁹ .	Use on drum rooms or parallel buses for aggressive punch.	Pro Audio Files describes it as adding bombastic sound ¹⁹ .
FG-Stress	Models the Empirical Labs Distressor; capable of emulating many famous compressors ²⁰ .	Swiss-army-knife compressor for vocals, drums and bass when you need flexibility (e.g., opto, FET, VCA styles).	Same source ²⁰ .
FG-2A	Models the Teletronix LA-2A optical compressor (see manual for details). Provides smooth, slow optical compression that levels vocals naturally.	Ideal second compressor after a fast one; adds levelling and tone.	(Not explicitly cited; general knowledge.)
FG-A	Based on the API 2500 bus compressor (see manual). Offers punchy, forward tone and variable knee.	Use on drum bus or mix bus for API-style glue.	(General knowledge.)
FG-Bomber	Combines transient shaping, dynamic frequency manipulation, compression, tube saturation and analog filtering; adds energy and presence ²¹ .	Use on drums, vocals, bass or mix bus to add excitement.	Pro Audio Files summarises its design ²¹ .
Gate Bundle (FG-Dynamics / FG-DS 902)	Gate/expander and de-esser models (based on dbx 902 de-esser).	Use to tame sibilance and control noise on vocals and drums.	(General knowledge.)

3 Other Slate Digital mixing & mastering tools

3.1 Virtual Tape Machines (VTM)

The **Virtual Tape Machines** plugin emulates analog tape to add warmth and weight to digital recordings. Equipboard's review notes that it is modeled after a 2-inch 16-track machine and a ½-inch mastering deck, with tape speeds of 15 ips and 30 ips and adjustable bias, noise reduction and bass alignment controls ²². These features let you dial in authentic tape compression and saturation ²³. Use VTM early in your mix (on individual tracks or the mix bus) to impart a cohesive, analog tone.

3.2 Virtual Buss Compressors (VBC)

VBC includes three mix-bus compressors—**FG-GREY**, **FG-RED** and **FG-MU**. Equipboard notes that FG-Grey delivers the punch and glue of a classic British console compressor and includes a transformer simulation ²⁴. FG-Red emulates a British “Red 3” compressor and is prized for its subtle transformer-driven saturation, providing warmth and cohesion ²⁴. FG-Mu is inspired by the Fairchild 670 and delivers lush tube warmth and shimmering highs ²⁴. Use these on the mix bus or mastering chain; each model offers a Mix knob and side-chain high-pass filter for flexible control ²⁵.

3.3 FG-X 2 Mastering Suite

FG-X 2 is a mastering suite combining a transparent compressor (FG-Comp) and a limiter (FG-Level). The user guide explains that FG-Comp offers several compression styles and advanced controls such as side-chain filters and mid/side linking ²⁶. FG-Level has four limiting modes:

- **Clear Mode** – extremely transparent; maintains original dynamics; ideal for jazz or pop ²⁷.
- **Tight Mode** – provides slightly tighter and more compact loudness control; suitable for pop/rock ²⁸.
- **Punchy Mode** – preserves transients while achieving higher loudness; ideal for rock, EDM or hip-hop ²⁹.
- **Loud Mode** – achieves maximum loudness with heavy compression; suits EDM/hip-hop ³⁰.

FG-Level includes **LoPunch** and **Detail** knobs to enhance low- and high-frequency transients before limiting, and the manual notes that adjusting these after dialing gain can tailor punch and clarity ³¹. True-peak limiting, constant gain monitoring and detailed metering ensure masters meet streaming standards ³².

3.4 Infinity EQ

Slate's **Infinity EQ** (not covered in our citations) is a modern parametric EQ with dynamic bands, tilt filters and surgical editing. Use it for precise tonal shaping and dynamic equalization on individual tracks or masters.

3.5 Fresh Air & MO-TT

- **Fresh Air** – high-frequency exciter/expressor that adds clarity and “air” to vocals and mixes. Use sparingly on vocals or the mix bus to open the top-end without harshness.

- **MO-TT** – multiband compressor inspired by the OTT preset; offers upward/downward compression and dynamic tone shaping. Great for drums, synths and parallel processing.

3.6 Other mastering tools

- **FG-Mu** (Vari-Mu from VBC) – tube compressor for smooth, glue-like compression; great for mastering.
- **FG-2A** – LA-2A style optical compressor; provides slow, musical levelling; good second compressor on vocals or mix bus.
- **FG-Bomber** – transient/saturation enhancer; use to add impact and excitement to drums, vocals or masters ²¹.
- **Infinity Bass** – (if available) adds sub-harmonic frequencies to enhance low-end.

4 Suggested Slate Digital vocal chain (FL Studio `.fst` example)

1. **Insert VMR** on the vocal track.
2. **FG-73** or **FG-76 preamp** for subtle saturation.
3. **Revival** – turn up Thickness (~ 1–2) to add warmth; adjust Shimmer for extra air ⁷.
4. **FG-N** (Neve 1073 EQ) – high-pass at 80 Hz; cut 200–400 Hz to remove muddiness; boost 3–5 kHz for presence; add 10–12 kHz for air ¹⁰.
5. **FG-116** (FET compressor) – ratio ~4:1; attack 3–10 ms; release 50–100 ms; aim for 3–5 dB reduction; Circuit 1 for aggressive modern tone or Vintage/Modern Blue series for different colors ¹⁶.
6. **FG-2A** (Opto) or **FG-401 Circuit 2** – slower attack (20–30 ms) and release (100–150 ms) for levelling and tone.
7. **FG-DS 902** – de-esser around 5–8 kHz to tame sibilance.
8. **Send the vocal to auxiliary buses:**
 9. **VerbSuite Classics / Lustrous Plates** for reverb. Choose a plate for pop vocals or a chamber for more space; adjust pre-delay and decay to sit the vocal in the mix.
 10. **Repeater** or another delay for slapback or stereo echo.
11. **On the vocal bus:**
 12. **Virtual Tape Machines** (set to 15 ips for more warmth or 30 ips for clarity) to add analog tape glue ³³.
 13. **Virtual Buss Compressors** – choose FG-Grey for pop/rock (punchy and gluey) or FG-Red for warmer saturation ²⁴. Blend with the Mix knob (e.g., 30–50 %).
14. **Master bus chain (optional):**
 15. **Virtual Console (Brit 4k or RC-Tube)** – unify the mix with console saturation ⁵.
 16. **Virtual Tape Machines** – use the ½-inch mastering deck at 30 ips for subtle tape compression ³⁴.
 17. **FG-Mu** or **FG-Grey** from VBC – gentle bus compression (2–3 dB). Adjust hi-pass filter to avoid pumping low-end.

18. **Infinity EQ** – apply broad tonal adjustments and dynamic EQ if needed.
19. **FG-X 2** – set FG-Comp ratio around 2–3:1 with slow attack for glue; choose a limiting mode (Punchy for transients or Clear for transparency) and adjust Gain until you reach the desired loudness ³⁵. Use LoPunch and Detail knobs to enhance bass punch and high-end clarity ³¹.

5 Tips for `.fst` vocal preset

FL Studio uses `.fst` files to store effect chain presets. To create a Slate-based vocal preset:

1. Load the VMR (with the modules above), FG-DS 902, and any other Slate plugins (VerbSuite Classics, etc.) onto the mixer channel.
2. Adjust each plugin as suggested and fine-tune based on your vocal.
3. Right-click the channel's effect slot and choose **"Save preset as..."** → **".fst"**. Name the preset (e.g., `SlateVocalChain.fst`). You can drag this `.fst` onto any mixer track to recall the chain.
4. If you want a docked chain, create a **Mixer Track Rack** in FL Studio, group it to the side and load your vocal preset for quick access.

6 Key takeaways

- **Edit before processing:** Balance levels and automate volume; compressors work better on consistent signals ¹.
- **Use analog emulations judiciously:** Slate's VMR offers preamps, EQs and compressors that emulate classic hardware with distinct tonal flavors ⁵. Choose modules that suit your material (e.g., Neve for warmth, SSL for punch, Distressor for flexibility).
- **Tape & bus processing:** Virtual Tape Machines and Virtual Buss Compressors add cohesive warmth and glue to mixes ³³ ²⁴.
- **Mastering:** FG-X 2 combines a transparent compressor and four limiting modes—Clear, Tight, Punchy and Loud—providing control over loudness and dynamics ³⁵. Use LoPunch and Detail to enhance transients before limiting ³¹.
- **Experiment and trust your ears:** Presets are starting points. Adjust drive, EQ gains, and compression parameters based on the source and genre. A/B with bypass and use constant gain monitoring to ensure you're improving the sound.

¹ ² ³ ⁴ [VOCAL-MIXING-CHEAT-SHEET.pdf](https://mastering.com/wp-content/uploads/2017/10/VOCAL-MIXING-CHEAT-SHEET.pdf)

<https://mastering.com/wp-content/uploads/2017/10/VOCAL-MIXING-CHEAT-SHEET.pdf>

⁵ ⁶ ⁷ ⁸ ⁹ ¹⁰ ¹¹ ¹² ¹³ ¹⁴ ¹⁵ ¹⁶ ¹⁷ ¹⁸ ¹⁹ ²⁰ ²¹ [Slate Digital VMR: What Are the Analog Emulations in Virtual Mix Rack?](https://theaudiofiles.com/virtual-mix-rack-by-slate-digital/)

<https://theaudiofiles.com/virtual-mix-rack-by-slate-digital/>

²² ²³ ³³ ³⁴ [Slate Digital Virtual Tape Machines Plugin - What To Know & Where To Buy | Equipboard](https://equipboard.com/items/slate-digital-virtual-tape-machines-plugin)

<https://equipboard.com/items/slate-digital-virtual-tape-machines-plugin>

²⁴ ²⁵ [Slate Digital Virtual Buss Compressors - What To Know & Where To Buy | Equipboard](https://equipboard.com/items/slate-digital-virtual-buss-compressors)

<https://equipboard.com/items/slate-digital-virtual-buss-compressors>

²⁶ ²⁷ ²⁸ ²⁹ ³⁰ ³¹ ³² ³⁵ [FG-X 2 User Guide](https://www.bhphotovideo.com/lit_files/963744.pdf)

https://www.bhphotovideo.com/lit_files/963744.pdf