SIDE KEY SYSTEM — USER MANUAL

SIXPACK

A 6-band compressor and expander for mastering, with a shared saturation stage and a calculator that listens before it suggests anything.

Version 1.16 **Systems** Windows & macOS **Formats** VST3 / Standalone

Language English

01

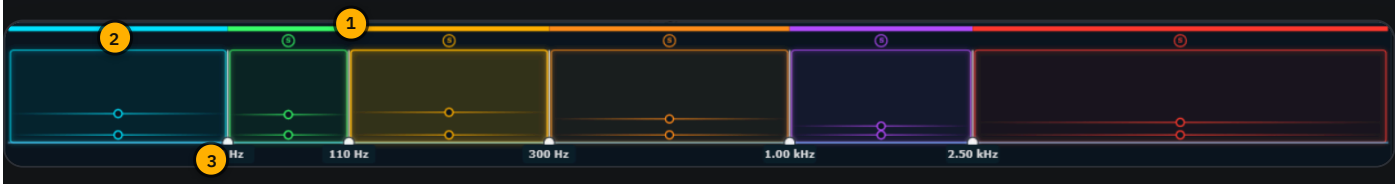
OVERVIEW

The control bar

Everything concerning the unit as a whole: power, A/B comparison, crossover type, input/output metering and final saturation. Nothing here acts on any one band in particular.

1. **Power** — main power. See the easter egg further below.
2. **Learn** — captures the program, launches the AI calculator (ch. 07).
3. **Gear icon** — opens the Options menu (ch. 06).
4. **Analog / Linear** — crossover type for the 5 cutoff points.
5. **Left VU source** — In, Out or THD.
6. **Left VU meter** — old-school needle, dB scale.
7. **Sixpack logo** — click to open the About window.
8. **Right VU meter**.
9. **Right VU source** — In, Out or THD.
10. **Link In / Link Out** — links the Input or Output of all 6 bands as a relative delta.
11. **THD Valve** — Soft/Tape/Iron/Air plus a saturation LED bar (ch. 04).

THE CROSSOVER SPECTRUM



1. **Color band** — one hue per band, cyan to red, reflects the active groups.
2. **S** — solos the band directly from the spectrum, same button as on the band itself.
3. **Crossover line** — drag the body to change frequency, click the handle to enable/disable; double-click the frequency to type a value.

Band fusing. Disabling a cutoff line doesn't remove it: it silently merges the two neighboring bands into one, without ever blocking the drag range of the remaining active lines. From six bands down to five, four, or fewer, in one click — no need to replan the whole crossover. Handy on the day a mix doesn't call for six stages of processing, only three or four well-placed ones.

02

×6 — LOW, LOW-MID, MID, HIGH-MID, PRESENCE, HIGH

A compression band

The six bands are six identical copies of the same module. What follows describes one band in Comp mode: the other five work exactly the same way, only the name and accent color change.

1. **Solo** — isolates the band to tune the crossover by ear.
2. **Gain Reduction / Ratio** — 36 LEDs, 0.1 dB each.
3. **Expand VU meter** — LEDs dedicated to the expander's boost, independent from gain reduction.
4. **Optical / Overkill / SC** — program-dependent release, 1176-style character, sidechain listen.
5. **Ratio** — 2:1 to 20:1, seven steps.
6. **In** — pre-gain before compression.
7. **Att** — compressor attack.
8. **Rel** — compressor release.
9. **Out** — makeup gain, shared with Expand.
10. **Exp** — ceiling of the expander's boost (ch. 03).
11. **Att** (purple) — the expander's own attack.

DOWN IN THE RACK — ALWAYS VISIBLE

Every band keeps a mini-strip on screen at all times, even while another band occupies the detail panel. This is the console view — the one you watch while mixing, not while tweaking.

1 **Solo**.

2 **Sel** — selects the band shown in the detail panel; Ctrl/Cmd+click adds it to the linked group.

3 **GR / Expand LEDs**.

4 **Output fader** — same parameter as the detail panel's Out knob.

5 **Wet / Spread** — Dry and Mono at the extremes.

Console pairing. Ctrl+click (Cmd on Mac) on Sel adds a band to the active group. Move the Output fader of *any* selected band and every other band in the group moves by the same amount, exactly like grouped faders on a real console. A plain click without a modifier clears the group and selects just that one band.

The one thing to remember. Comp and Expand run at the same time, on every band, all the time. The Comp/Expand button doesn't switch anything off: it just chooses which set of controls sits under your fingers. You always hear the full processing, never half of it.

03

PER BAND

Expand mode

Every band hides a second compressor. Well, not quite: more of an inverted compressor, one that lifts the quiet signal up toward the threshold instead of squashing the loud one down. That's upward expansion.

1. **Expand VU meter** — dedicated LEDs, light up only for the boost (never for gain reduction).
2. **Expansion ratio** — its own set of values, entirely independent from the compression ratio.
3. **Exp** — boost ceiling in dB. Zero by default, meaning off.
4. **Att** (purple) — the expander's own attack, up to 500 ms — far slower than a compressor usually asks for.
5. **Out** — shared makeup gain, common to Comp and Expand.

Exp at zero = the expander simply off, the default state when the plugin opens. Bring the magic in gradually, not with one generous nudge at 3 a.m. — the future you, the one listening back tomorrow, will thank you.

04

ONE STAGE, SHARED ACROSS ALL 6 BANDS

The THD Valve module

A single stage of harmonic saturation, applied after the six bands are summed. Not a per-band sculpting tool: a final coat of varnish, the one that glues a mix together at the end of the chain.

THE FOUR CHARACTERS

S

Soft

The quietest of the four. Rounds off peaks without drawing attention to itself.

T

Tape

Gentle tape-style compression. Adds body in the low-mids.

I

Iron

Transformer saturation, more assertive. Character, not a disguise.

A

Air

Favors the upper harmonics. Brightness without reaching for an EQ.

> A True Peak safety line protects the saturation stage from any audible overshoot: you can push the Drive without worrying about the last-minute accident — the one you always discover after export, never before.

05

THREE TOOLS THAT LOOK LIKE NOTHING MUCH

Presets, A/B and Power

And without which no serious mastering decision is possible. The preset bar (arrows, name, copy, paste, save, trash) stays accessible at all times at the bottom of the window.

Factory presets

Starting points designed by style, plus neutral mastering presets. They're starting points, not turnkey solutions.

A / B

The real decision-making tool. Your ear adapts to a treatment within seconds: without regular A/B, you almost always end up over-compressing without noticing.

Copy / Paste / Save

Duplicate a preset's full state, paste it, save your own. The trash never touches the factory presets.

Power

A hard cut, not a momentary bypass. Every LED goes dark with it — see the easter egg in chapter 01.

06

GEAR ICON

Options menu

The General section is purely about comfort of use. The AI section is set here but is better understood in the next chapter — it deserves more than a table.


X
OPTIONS
GENERAL
WINDOW SIZE
75%
80%
85%
90%
95%
100%
LINEAR MODE CPU BUDGET
LOW CPU
MEDIUM CPU
HIGH CPU
DESIGN
LIGHT THEME
LICENSE MANAGER
AI
AI FIDELITY (RESTORE ORIGINAL TONAL BALANCE)
8
FIDELITY
AI EXPAND MODE
9
OFF
SOFT
MEDIUM
HARD
AI EXPAND ATTACK / RELEASE CHARACTER
10
OFF
SMOOTH
MEDIUM
PUNCHY
AI EXPAND AMOUNT
11
OFF
SMOOTH
MID
HARD
CLOSE

1. **Window Size** — 75 to 100 percent, purely cosmetic.
2. **Linear Mode CPU Budget** — precision versus latency in Linear crossover.
3. **Light Theme** — light brushed-metal chassis. LEDs stay dark and vivid regardless of theme.
4. **License Manager**.
5. **AI Mastering Target** — loudness target in LUFS per platform (ch. 07).
6. **AI Compression Mode** — from Soft to Hard.
7. **AI Attack/Release Character** — from Smooth to Punchy.
8. **AI Fidelity** — corrects the balance between bands based on what's actually measured.
9. **AI Expand Mode** — drives the expander's Ratio.
10. **AI Expand Character** — drives Attack/Release, reversed sense from compression.
11. **AI Expand Amount** — drives the Exp ceiling.

07

LEARN, THEN A FEW SECONDS OF LISTENING

The AI calculator

Click Learn, let it listen for a few seconds, and Sixpack proposes compression, expansion and crossover settings consistent with what it hears. It doesn't replace your decisions — it just spares you a blank page.

1

AI Mastering Target

Loudness target in LUFS for the major streaming platforms, or a custom value. Guides the calculator, nothing more: the result stays adjustable afterward.

2

AI Style & AI Fidelity

Style applies a per-band output offset consistent with a given musical genre — a mix signature, not compression. Fidelity dynamically corrects the balance between bands based on what's actually measured; the two corrections stack without conflict.

3

AI Expand — three settings, three roles

Amount drives only the Exp ceiling. **Mode** drives only the Ratio. **Character** drives only Attack and Release — Smooth being slow and Punchy fast, the reverse of the convention on the compression side.

4

AI Scope

What the Learn button is allowed to recalculate: Crossover, Detectors, Compression. Turn off whatever you've already set by hand so the AI leaves it alone.

How it measures. The analysis relies on the signal's Crest Factor — the gap between peak and average level — measured band by band over a few seconds of audio. One click computes and applies compression and expansion for all six bands at once; afterward, switch freely between Comp and Expand without ever rerunning the analysis.

08

NOT A REQUIRED METHOD

Mastering tips

What follows is what, in practice, saves time and avoids regrets when you listen back the next day.

1

Start with the cutoff frequencies

Before touching a single ratio, use each band's Solo to listen to Low, Mid, High and their neighbors individually, and place the 5 cutoff points according to the track's actual content. If six bands feel like too many for the source, merge two of them rather than forcing a setting you don't need.

2

Over-compress, on purpose

Push the Ratio, gain reduction and a short Release well past reasonable, just long enough to hear where the compressor starts pumping. Once you've found those limits by ear, back off gradually — finding the edge before pulling back is still faster than creeping up slowly from zero.

3

Set Release before Attack

Release decides whether the compression disappears into the mix or announces itself. Once it's set, Attack becomes a far more intuitive control for shaping transients.

4

Pair faders like on a console

On a mix where two or three bands need to move up or down together late in the session (often Presence and High), select them with Ctrl/Cmd+click on Sel and adjust in one motion instead of three back-and-forths.

5

The AI calculator as a starting point

Whether you're just starting out or you've been mastering for twenty years, Learn speeds up the search phase: a transparent compression in a few seconds, a more pronounced version a moment later. A starting point, never the finish line.

6

A/B regularly

The ear adapts to a compression within mere seconds. A few tenths of a decibel are sometimes all it takes to tip the balance between subtle and excessive.

7

The expander: powerful, demanding

It only steps in where the compressor is no longer reducing anything: its job is to put a little dynamics back in, not to run a second, separate treatment. In mastering, a range of 0.3 to 3 dB covers the vast majority of uses. Pushed too far, it produces noticeable pumping and a master that loses cohesion.

8

Trust your ears

Every rule in this chapter is meant to be broken the day a track asks for it. The right setting is the one that serves the music, not the one that follows the procedure to the letter.

09

FOR THE CURIOUS

Spec sheet and credits

Architecture	Multiband, 6 bands (Low / Low-Mid / Mid / High-Mid / Presence / High), feedforward topology
Crossover	5 cutoff points, Analog (minimum phase) or Linear (linear phase, FIR), each point foldable to merge two neighboring bands
Compression	7 discrete ratios, 2:1 to 20:1, per band
Upward expansion	Independent per band, own Ratio, Attack, Release and ceiling, always active alongside compression
Detection	High-pass filter and dual Bell point per band, per-band external sidechain
Character	Optical (long, program-dependent release) and Overkill (1176 all-buttons-in)
Saturation	THD Valve — Soft / Tape / Iron / Air, single global stage, built-in True Peak safety
AI calculator	Compression, expansion and crossover, with per-platform loudness targeting
Console pairing	Multi-select of Output faders (Ctrl/Cmd+click on Sel), relative-delta movement
Formats	VST3, Standalone
Systems	Windows and macOS
Interface	Resizable from 75 to 100 percent, light or dark theme

Thanks for reading this far. That's rare, and it always shows in the final result.