

Logic Pro X Compressor Circuit Types Cheat Sheet v.1.9

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Inspiration	<i>"Inspired by", not emulation</i>	Original Emagic/Apple design	Focusrite Red 3	Urei 1176LN blackface	dbx 160/165	SSL G Bus	Urei 1176 silverface	Teletronix LA-2A
Compressor GUI	<i>Screenshot</i>							
Hardware	<i>Photo</i>	N/A						
Typical application	<i>Often used for</i>	Clean compression · Synths · External side-chain ducking	Parallel compression · Drums · Full mix bus	Peak control on vocals or guitar · Smashing (snare) drums · Beefing up bass	Adding punch on drums or bass	Drum group · Piano · Full mix bus (gently)	Same as Studio FET, only a lot more aggressive	Levelling of vocals · Guitar · Bass · Piano
Usage/ settings tip	<i>Your Mileage May Vary</i>	Peak mode and high ratios to shape and control transients. RMS mode, soft knee, low ratio to smooth overall levels.	Parallel smash: Fastest attack, medium release, high ratio. Auto Gain@0, pull down threshold. Blend with Mix knob.	Very fast attack to control the peaks. Slow attack to emphasize the transient/punch in bass or drums.	Auto attack/release clamp down quickly, but slow enough to accentuate punch. Watch out for over-compression.	Side-chain HPF @ ≤ 80 Hz to reduce pumping. Use Sum detection to reduce pumping from loud, wide stereo sounds.	High ratio, fastest attack, fast-medium release can pull up the tail on drums or plucky sounds	Smoothing vocals or averaging levels of bass. Often inserted after a FET comp that controls the peaks first.
RMS/Peak	<i>If detection is averaged or peak level</i>	RMS or peak	Peak	Peak	RMS	Peak	Peak	Peak-ish
Feedback/ Feed-forward	<i>Placement of the side-chain</i>	Feed-forward	Feedback	Feedback	Feed-forward	Feed-forward	Feedback	Feedback
Harmonic saturation level	<i>Higher levels mean more coloration</i>	Low level	High level	High level	Medium level	High level	High level	Low level
Harmonics type	<i>Odd or even order</i>	3rd harmonic only	Odd order	Odd order	Odd order with 3rd harmonic emphasis	Odd order	Odd order	Odd order
Dynamic interaction of saturation	<i>How saturation is affected by compression</i>	None	Proportional to compression amount	Proportional to compression amount	Proportional to compression amount	Fixed	Fixed	None
Noise in saturation	<i>If non-harmonic noise is introduced</i>	None	None	None	None	High level	High level	Low level

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Attack & release control	<i>If attack & release are adjustable</i>	Yes	Yes	Yes	No, full auto	Yes	Yes	Yes
User adjustable knee	<i>If the knee is user adjustable</i>	Yes	No	No	No	Yes	Yes	Yes
Knee transfer curve	<i>Relation of nominal knee value to ratio</i>	Inverse bell-curve	Compound S-curves	Gentle bell-curve	Gentle bell-curve	Linear proportional	Linear proportional	Linear proportional
Ratio transfer curve	<i>Relation of nominal ratio value to actual ratio</i>	Linear	Gentle inverse bell-curve	Linear	Linear with forced soft transition knee	Linear	Linear with logarithmic knee near range cap	Gentle logarithmic
Range	<i>Max. gain reduction (cap)</i>	-48 dB GR	-36 dB GR	-26 dB GR	-44 dB GR	-48 dB GR	-19 dB GR	-41 dB GR
Ratio dependent range	<i>If range varies with ratio</i>	Low correlation	High correlation	Medium correlation	Low correlation	No	No	No
Hidden frequency dependency	<i>If bass can result in more compression</i>	None	Small	Small	Small	Medium	Medium	Strong