



PAWN SHOP COMP

user manual 1.0

KORNEFF
the other side of sound

VERY COOL

Very cool. You bought a Pawn Shop Comp from Korneff Audio. We hope you love recording with it, and we hope this PDF helps you to unlock its power.



OPERATING REQUIREMENTS

Minimum System Requirements

- Quad Core i5 Processor
- 4GB of RAM
- Mac OS X 10.7 or Later
- Windows 7 & Above

Supported Plugin Formats

- Intel Mac 64bit: VST3, AU, AAX
- Windows 64bit: VST3, AAX



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SPECIFICATIONS

Type:	Compressor Amplifier
Gain:	56 db bridging 600 ohm line
Frequency Response:	±2.4 db, 30-15,000 cycles
Power Output:	+24 dbm (as straight amplifier)
Harmonic Distortion:	At 25 db of compression: Less than 9.4%, 35-15,000 cycles; (0 db threshold setting)
	At 30 db of compression: Less than 6.5%, 25-10,000 cycles;
	(0 db threshold setting)
Noise Level:	74 db below rated output (–111 dbm equivalent input noise)
Input Impedance:	15,000 ohms bridging transformer
Source Impedance:	Any
Load Impedance:	600 ohms
Maximum Compression:	100 db
Attack Time:	Adjustable: .001 to .1 seconds
Release Time:	Adjustable: .01 to .3 seconds (67% recovery)
Threshold:	Adjustable: 0 db to -100 db
Compression Ratio:	Adjustable: 2:1 to 20:1, with increment of 1
Power Supply:	117 volts, 60 cycles, 20 watts
Tubes:	12AX7, 6V6
Dimensions:	600px width, 400px height
Color:	Brown
Weight:	68MB Approx.

OVERVIEW

The Pawn Shop Comp is a vintage style compressor/limiter. It has a tube emulation audio circuit path, but the detector circuit, which determines compression curves (punch and smoothness) is a solid state FET emulation. This means that the Pawn Shop Comp has the warmth of a tube compressor, but the punchie and distinctive compression characteristics of a classic early-70's solid state compressor. You can think of it as the love child of an LA-2a and a Neve 2264, if you find that helpful. But isn't either of those really. It is its own thing.

In addition to the compressor, the Pawn Shop Comp has a pre-amp section which allows you to adjust warmth and add grit to your signal by adding harmonic distortion, and a two band EQ section, which lets you add gentle vintage-style peaking equalization curves to the lows and mids. This EQ is subtle, but you'll find it very useful.

There's also an Operating Level control, which emulates mismatched gear levels, and lets you dial in even more punch and attitude (this is a really useful control that almost got left off the final product! Glad we left it on!). There are output and input controls to properly gain stage the Pawn Shop Comp in your signal flow, as well as a wet/dry control for built in parallel processing.

Finally, you can switch between traditional carbon or metal film resistors, which effects the high end, and two different sets of FETs, which allow you to adjust the compression curves of the Pawn Shop Comp.

The front panel has all the controls normally found on a compressor: threshold, ratio, attack, release and both a manual and auto makeup gain (pro tip: switch it to Auto and leave it alone). The back panel allows you to adjust preamp gain and saturation, the EQ section, the Operating Level, input and output, and swap out resistors and FET's.

The Pawn Shop Comp isn't just a compressor; it's really a channel of integrated components. And this allows you use it on literally any track of your recording, or across any bus, and get stellar results.

FRONT PANEL CONTROLS



ON - press this to engage the compressor circuit. If you switch this off, the compressor is bypassed. Your signal will still go through the tube signal path, so you can use the Pawn Shop Comp as a just a preamp and EQ.

AUTO - this engages automatic makeup gain. 90% of the time you can just leave this on.

MANUAL MAKEUP GAIN - twist the screw at the center of the VU meter to manually add makeup gain.

THRESHOLD - lower this (turn counter clockwise) to set the level at which the compressor begins working. This control also interacts with the makeup gain when that control is set to AUTO, so you can concentrate on sound and not worry about levels.

RATIO - this controls how much compression is added when the signal goes above threshold. Fully counterclockwise is 2:1 (not much compression). Fully clockwise is 20:1 (a lot of compression—effectively a limiter).

ATTACK - how quickly the compressor works once a signal goes above threshold. This allows you to control the peaks and transients of a signal. Set it fully counterclockwise to nip off all but the fastest drum transients. As you turn it clockwise more of the peaks and transients will get through and the sound will become punchier. This is adjustable from 1ms to 100ms.

RELEASE - how quickly the compressor stops compressing after a signal drops below threshold. Release can have a lot of effect. Setting a short release (counterclockwise) will tend to bring up the quiet parts of a signal—the breaths on a vocal, the ring of a snare drum, room ambience, etc. Setting it long (clockwise) will keep the compressor in longer and tend to smooth things out and make the compression less noticeable.

PAGE TOGGLE - click on the KORNEFF AUDIO name plate to access the "other side" of the Pawn Shop Comp for even more controls.

PRESET BROWSER - click on the piece of tape with the Sharpie Text (where it says PAWN SHOP COMP) to access the preset browser and load and save presets.

IDEAS ON SETTING THE COMPRESSOR

When the Pawn Shop Comp first loads you'll hear a slight increase in gain, which is a design feature and caused by the PREAMP control being slightly up. We did this so you absolutely know that the unit is in your signal chain. The ATTACK and RELEASE are in a good, average position. The RATIO is at 2:1 and the THRESHOLD is all the way up.

The initial settings are a good start. We usually begin working on a track by lowering the THRESHOLD (counterclockwise) until the meter jumps a bit. Click on the AUTO makeup gain. Turn up the RATIO a bit. Decide if you need more punch and then fiddle with the ATTACK. Decide if you want more "pump" and more of the quiet details and fiddle with the RELEASE.

If you want to really hear the compressor working, turn up the RATIO, set the RELEASE short and turn the ATTACK clockwise.

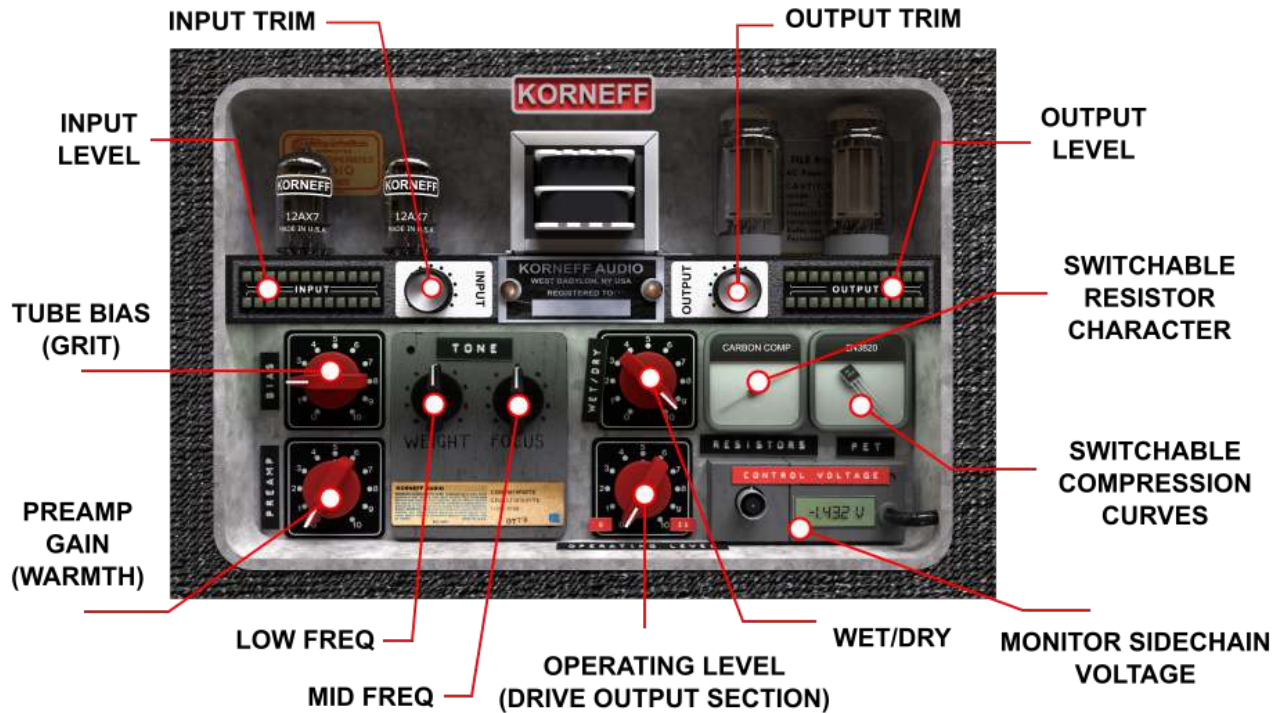
If you want a very smooth sound, with minimal audible compression, lower the RATIO to less than 4:1, set the ATTACK somewhere in the middle and turn the RELEASE clockwise, perhaps even fully clockwise. Then lower the THRESHOLD so that the meter indicates the compressor is working for most of the signal.

You'll find it is very hard to set the controls in such a way that the Pawn Shop Comp sounds bad. Feel free to ignore the actual numbers (who cares what the ratio is if it sounds good) and don't pay too much attention to the meter. The Pawn Shop Comp is intuitive and highly musical.

Using just the front panel controls, you can get the Pawn Shop Comp do wonders. To really go nuts, click on the nameplate to go to the "other side" and tweak things even further.

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REAR PANEL CONTROLS



PREAMP - turn this clockwise to increase gain and add gentle saturation for more warmth and a slight lift in the high end (caused by added harmonic distortion).

BIAS - turn this clockwise to add grit and very audible distortion and crunch. Basically, this control is emulating setting tube bias incorrectly. In an actual piece of physical equipment this wouldn't be the best idea. On the Pawn Shop Comp, do what you want—you won't break anything except the sound barrier!

WEIGHT - this adjusts a gentle (wide Q) peak-style EQ centered at 120 Hz. It's initially at 0db gain. Turning it clockwise will add up to +4dB of gain, counterclockwise will reduce it by -4dB. WEIGHT was added to the Pawn Shop Comp as a way to compensate for the loss of bottom end when a signal is really squashed by compression.

WEIGHT (cont.) If you're really hammering a signal with the Pawn Shop Comp's compressor circuit, adding a few dB of WEIGHT will restore bottom end and balance. Conversely, when compressing things like vocals and acoustic guitars, a little bit of cut can clean up an otherwise lumpy, chesty sounding track.

FOCUS - this adjusts a gentle (wide Q) peak-style EQ centered at 1.2 kHz. It's initially at 0db gain. Turning it clockwise will add up to +4dB of gain, counterclockwise will reduce it by -4dB. 1.2 kHz is an ignored area and people are very hesitant to boost in here, because too much can sound harsh and/or honky. However, with a wide, gentle curve, a slight boost in here adds presence and "width." Adding a dB or two of FOCUS across, say, a drum bus, will make the kit sound wider. It's psychoacoustics for sure—there is no spacial processing going on in the Pawn Shop Comp—but try it and see if it doesn't "open things up" in your mix.

OPERATING LEVEL - turn this up to add gain, presence and "in your face." Turn it WAY up to get HUGE amounts of distortion. In the old days, mismatched operating level would tend to blow gear up. Literally. Like smoke from behind the rack and a bad smell that you could tease the intern about ("Steve—did you just fart??") With the Pawn Shop Comp, the worst you can get is some digital clipping. Very often turning this up 3dB (clockwise just a tiny bit) can make a big difference.

INPUT and **OUTPUT** - this does what it says it does—you can adjust the input feeding in and output levels feeding out. If you're adding a lot of gain via the PREAMP, BIAS and the OPERATING LEVEL controls you will be adjusting the OUTPUT down. A lot. If the signal feeding into the Pawn Shop Comp is low—like the track was recorded too low—you'll be able to compensate for that using the INPUT control.

WET/DRY - use this to blend unprocessed signal (dry: what is feeding into the Pawn Shop Comp) with processed signal (wet: the signal after you run it through all of the elements of the Pawn Shop Comp). This is a very useful control. It's good for restoring a bit of the high end (back it off to about 85%). Sometimes, after you work on a track or a bus or a channel in solo (which everyone says you shouldn't do but everyone does), you'll un-solo the track and hear it in context to the rest of the mix, and realize you maybe went too far. Back down the effect by turning the WET/DRY counterclockwise until it fits in better.

RESISTORS - switch to CARBON COMP to round off the high end a bit and add a bit of noise for a more vintage vibe. The initial setting, METAL FILM, is quieter and brighter. This is a very subtle effect and it will get lost in a big, thick mix. However, if you're working with less sound sources—a voice and an acoustic guitar, as an example, switching it over to CARBON COMP is a nice touch.

FET - this allows you to adjust the compression curves by selecting between two different sets of FET emulations. 2N5486 FETs give a lot of predictable punch and give the Pawn Shop Comp a response similar to vintage '70's Neve solid state compressors, API compressors, 1176's and more esoteric things like the ADR Compex. 2N3820 models an FET set that had some issues in the components that caused some unpredictable behavior. Sometimes you'll click over to the 2N3820 setting and hear no difference, but sometimes it will sound better, and other times it will lose punch and sound smoother... it really depends on what you send through it. We will be adding additional FET sets in the near future so you have more possibilities here.

CONTROL VOLTAGE - lets you observe the operation of the compressor on the back panel where there is no meter. You can't adjust this, but you can tell how much the compressor is working by watching it (0 or low number = not much). This is more of a development feature we use to fine tune response curves, and it looked cool, so we left it on the production plugin.

IDEAS ON TWEAKING THE OTHER SIDE

There is so much tweakability on the back side of the Pawn Shop Comp it is hard to know where to begin in terms of giving guidance. BIAS is great for adding buzz and distortion to basses and really hard-assed vocals. Turning up PREAMP can get a little more oomph and sparkle out of a softer vocal, acoustic instruments, and snare drums.

As stated earlier, 3dB up on OPERATING LEVEL pushes the whole track forwards and more "in your face." This works great on kicks and snares, rap vocals—whatever you want to push out of the speakers a bit more. If you want to cause all sorts of noise and distortion, turn down the OUTPUT a lot and crank up BIAS and PREAMP and OPERATING LEVEL... you'll get total mayhem.

A CAVEAT

Because the Pawn Shop Comp is a digital emulation, you can tweak it in ways that you would with a physical piece of audio equipment. In the real world things blow up and burn out. HOWEVER, all digital equipment is capable of tremendous amounts of gain, the Pawn Shop Comp included. Digital clipping is a real possibility, and a digitally clipped signal going through speakers at a high volume is NOT GOOD AT ALL. You don't want to burn out the voice coils of your speakers, so by all means experiment but be sure to watch the levels feeding out of your gear and into your monitor amplification: you don't want to digitally clip signals.

IDEAS FOR APPLICATIONS

The Pawn Shop Comp wasn't designed to do any one specific type of task. It's not a vocal compressor or a bus compressor. It works well everywhere. In fact, for many users it is the first processing plugin reached for when working on a track. Because it is so versatile, and because it is so hard to get a bad or unusable sound out of it, it is difficult to give specific setting for a particular application. So, here are some ideas and guidance to get you started.

On Bass

The Pawn Shop Comp combines the warmth and smoothness of a tube compressor and the punch of a FET limiter, so it is a natural fit for bass. Start with the ATTACK to about 2 o'clock and the RELEASE to about 11 o'clock, and RATIO at 4:1. Turn down THRESHOLD to get the meter jumping. Too short a RELEASE can result in some strange things in the bottom end as the compressor starts "riding" the peaks and valleys of the waveform rather than responding to the bass sound in its entirety (all compressors with a fast release do this). Use the ATTACK to get control of the transient, set it slower to make the bass punchier.

On the Other Side, use BIAS to get a fuzz bass effect, FOCUS can make things more articulate, and WEIGHT can strengthen the bottom end. You might also think about doing a small cut with WEIGHT, it tends to clean up the bottom a bit.

On Electric Guitars

Pawn Shop Comp 's designer, Dan Korneff, is renown for guitar sounds, so it is a given that the Pawn Shop Comp sounds great on electric guitars. Use slower settings on the ATTACK control to bring out picking and percussiveness. Setting the RELEASE long can make hand noise and hum less obtrusive, but long releases tend to dull down the entire guitar sound.

On The Other Side, the WEIGHT control is almost specifically designed to add back in missing bottom end on compressed guitars, while FOCUS will bring out note articulation. BIAS and PREAMP can be used together to add a nice simulation of old tube amp crunch and breakup.

On Acoustic Guitars

The same ideas apply to acoustic guitars as electric: control the percussive character of the acoustic guitar using the ATTACK knob, use the RELEASE to control resonance and sustain, as well as sparkle.

The WEIGHT control on the back can be used to cut out some lower end boom, and a boost in FOCUS will increase articulation and presence.

On Vocals

The Pawn Shop Comp can be used to barely touch a vocal or smash it to hell and back. ATTACK controls the bite and intelligibility of the vocal, RELEASE controls breathiness and can be used to increase intimacy (at faster settings). Long RELEASE settings will dramatically smooth vocals out.

On The Other Side, get rid of lower end chestiness by doing a tiny cut with WEIGHT, and top off and widen the vocal a bit with FOCUS. Use that OPERATING LEVEL control to add gain and presence to the vocal. Crank it way up (and drop the OUTPUT level) to get distortion and mojo happening. The PREAMP control will give vocals a nice, glassy sheen.

On Drums

Again, the Pawn Shop Comp was developed by an engineer known for great rock drum sounds, and he made the plugin for his specific work so.... It's great on drums. Use it on everything from kicks to snares to toms. Turning up OPERATING LEVEL by 3dB or more makes drums jump out of the speakers like cannons. Dialing in a higher BIAS setting can add vintage overload crunch to a kick.

The Pawn Shop Comp works on overheads, but we suggest for this application that you set a little too much compression—really get those cymbals to last, and then go to The Other Side and dial in some unprocessed signal using the WET/DRY to recover lost high end.

Across the Drum Bus

On a drum buss, the Pawn Shop Comp is flat out amazing, and you can get sounds from subtle to the classic "All Four Buttons Down" sound of the 1176. Use the RELEASE to adjust how much room sound there is (fast release = more room) and ATTACK to let the initial hits get through (slower attack = more punch... up to a point. Too slow an attack results in loss of punch and very little compression applied to the tracks). In fact, often when working on a mix we'll put the Pawn Shop Comp on the drum bus first thing and start playing with setting before working on any of the drum tracks individually.

Across the Mix Bus

While the Pawn Shop Comp wasn't specifically designed for use across the mix bus—we have a specific product for that coming out in a few months—predictably, it works great there as well. Because the Pawn Shop Comp is a vintage emulation, it has a gentle high end roll-off starting at about 14 kHz, and this can dull down your finished mix, especially if you like really bright, almost harsh mixes. Use the WET/DRY control to ease off the effect and add back some of the unprocessed signal to restore the high end a bit.

The Pawn Shop Comp across a mix adds a lot of punch, especially if you set the ATTACK a bit slow and the RELEASE on the short side. People talk about buss compressors adding "Glue" and getting everything to work together harmoniously. The Pawn Shop Comp is more like epoxy on a mix if you overdo it... ever get epoxy everywhere? It makes a mess. However, feel free to overdo it, and then back it down using WET/DRY.

CONCLUSIONS

Ok, there it is—the Pawn Shop Comp in a huge nutshell. Please visit our Facebook group (<https://www.facebook.com/KorneffAudio/>) and leave a message there if you have any questions, or email us directly at info@korneffaudio.com.

Thanks again for gettin' yerself a Pawn Shop Comp and supporting Korneff Audio. Make great records! Make great music.