

# Mode Machines FairComp 670 Review on BBoyTechReport.co m



**Mode Machines** introduced the [FairComp 670 \(FC670\)](#) as a part of their new PRO AUDIO SERIES of classic studio technology. According to Mode Machines the [Faircomp 670](#) is "the first ever original replica of the legendary FAIRCHILD 670 tube compressor."

As mentioned in the original announcement back in April, the [Mode Machines FairComp 670](#) has a few noticeable additions that weren't originally seen on the classic 670's. As stated by Mode Machines "The "ZERO" – "BALANCE-" and "DC-THRESHOLD" parameters have, until now, only been controlled via modification of the inside of the original unit, as these were originally only used as a clean broadcast limiter for the demands of broadcast limitation. These trimpots have now been replaced by professional potentiometers that are fully accessible to the user."

So lets begin with the fact that most of us will likely be more familiar with one of the many software modeled FairChild 670 compressors available. If you know any of the software models like UA's or IK Multimedia's T-Racks version (my fav), you may have an idea of the character that it has. Well the hardware version by Mode Machines brings that with added warmth thanks to the 20 tubes and 8 hand picked transformers used in the "hand made" process of manufacturing the [FairComp 670 \(FC670\)](#) somewhere in Germany.

The build is solid. So in fact that it epitomizes the phrase "Built like a tank." Indeed it is built like a tank with its all metal chassis which is what you should expect from gear in its class. The [Mode Machines FairComp 670](#) chassis is designed to fit a standard 19" wide studio rack. Be prepared to give up 8 rack units in order to give the FC670 a home. The depth of the chassis is approximately 6 inches but with the tubes and transformers extending well beyond the back of the chassis the FC670 would need at least another 5 inches of back end clearance.

The front panel of the [Mode Machines FairComp 670](#) is a no frills black panel with nicely spaced out knobs. The white etched lettering stands out boldly so that each function is clearly labeled. There are two VU meters that illuminate in the classic orange typical of vintage VU meters and / or what we are used to from software modeled classic gear.

There are 20 tubes and 8 transformers in the [Mode Machines FairComp 670](#). Its worth mentioning that these tubes get pretty hot. So take precaution not to allow anything to touch them (including yourself) as it will likely cause burns.

As a stereo unit the [Mode Machines FairComp 670](#) has two input and two output connectors on its back side. Each of them use the standard XLR plug connectors. Each input and output are labeled accordingly just as each tube connector is labeled with its respective tube type / model number.

I've read that the engineers charged with the maintenance of a classic 670 tend to replace the tubes once or twice per year depending on usage. Mode Machines, dedicates a portion of the manual to "The replacement of tubes." If followed properly, you'll have no problem performing

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the task of replacing the tubes. The tubes can be bought a number of places but Mode Machines recommends [BTB Elektronik](http://www.btb-elektronik.de/) (<http://www.btb-elektronik.de/>)

If you care for specifics of the 20 tubes, no problem, tech out / black out. There are

- 8 - 6386 LGP JJ
- 2 - ECC83S JJ / 12AX7
- 2 - 12BH7 EH
- 4 - 6973 EH
- 1 - GZ34
- 1 - EL34
- 1 - 6084 (can be replaced with an E80F, not to be confused by the more popular EF80)
- 1 - 5651

The [Mode Machines FairComp 670](#) has a left and a right channel that is obviously metered via the left and right VU meters. Each meter has as a set of controls to the right of it which correspond to the VU meters approximate reading of the source material as it is effected by the unit.

At the top, the Left VU meter has a Left-Lat Metering switch that can be set to three positions, BAL, ZERO, BAL. Just beneath the Left-Lat Metering switch are two knobs, the ZERO regulator and the BAL regulator. As stated in the manual "Using the two BAL positions of this selector switch, the meter displays the bias currents of both branches of the Push-Pull Triodw stage." The trick here is to set the balance and zero point according to the original intended use of the unit. This can be achieved by switching between the BAL positions, adjusting the BAL regulator so that each BAL position is set to zero. Then setting the zero position via adjusting the ZERO regulator knob until the VU meters read zero. For stereo applications these settings can be mirrored on the Right-Vert Metering switch which resides to the right of the Right VU meter.

Thats the basic function of the unit but the fun is in experimenting with these values. Changing these BAL values / settings or "operating the triods stage with a slight unbalance of its bias currents" adds sweet touches of even harmonics to the signal which effects the timbre of the source material. You can see how a bit of experimenting can easily yield pleasing and or mind blowing results.

Digging a bit deeper, the left and right input gain knobs is where the "input signal is attenuated by up to -20db." A bit further right of the input knobs are the Threshold AC knobs (Left-Lat and Right-Vert). To understand this unit you have to know that the Threshold AC knobs set the stage for the [Mode Machines FairComp 670](#). Set to the the far left (counter clockwise), the FC 670 acts

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as a "linear amplifier". Set dead center (12 O'clock), the FC 670 functions as a compressor. Finally, set far right (clockwise), the FC 670 acts as a limiter.

Beneath each, the Threshold AC knobs, are the Threshold DC knobs. The Threshold DC knobs are used too set the threshold / amount of compression. Next, finally we have the time constant which sets the speed at which the signal is effected.

Finally there is the mode switch which allows you to set the mode of operation for the unit. It can operate in stereo (left/right) where the left and right channels are linked or it can operate in Left Vert mode where each channel operates independently of one another.

When it comes down to the sound of the [Mode Machines FairComp 670](#) there is obviously no reason why anything at any setting would run thru this unit and not sound warmer and a bit more smooth. Attack times can be set to quick and sharp to make the sound pump with warmth or it can be set to long and smooth. It does both just as well. Even if no compression is used and it is left at minimal levels operating as a linear amplifier and sort of a pass thru the sound is warmed and given more depth. Toying with the settings and tossing rules away for a bit can yield really pleasing results. Especially with the tone and even harmonics added when, as mentioned above,

"operating the triods stage with a slight unbalance." Still when used as a compressor or limiter the character remains lush, warm and dreamy. I am reluctant to say it but the word that comes to mind is "fat." It's warm analog flavor and tonal color fattens the sound in the most pleasing way.

Tracking thru the 670 into your DAW will feel and sound great as that digi high end is smoothed out. On the bus it serves as the glue that pulls things together. Beats bang and become fat and warm, while vocals seem to melt into one another when running thru the 670. But I have to say you may want

something a bit more aggressive for drums. Still if you are looking for the characteristics described for drums, then this is your unit. The warmth alone wins the bid but be warned this joint is not for the faint of heart. Its heavy duty metal construction and subsequent heavy weight is not for the average bedroom producer (not to mention the hefty price weighing at approximately \$\$\$\$\$). This joint is for the big boys and the brave hearted.

[Mode Machines](#) has another winner.

For more information head over to [Mode Machines](#) and keep an eye out for more Pro Audio gear.

