

# MERCURY 66 LIMITING AMPLIFIER

All Tube, All Transformer, Mono [Linkable for Stereo], Tube, Limiting Amplifier

The new **Mercury 66 Studio Limiting Amplifier** [Mk. III] is an 'All Tube - All Transformer', fully balanced, variable-bias limiter. Based on the most sought after product in this genre, the legendary Fairchild 660. This limiting amplifier is recognized essential tool for making great recordings. Many manufacturers have tried to copy the Fairchild circuit but have failed to capture the true sonic essence and presented a similar look and functionality but failed to capture the overall tone of the original. Until now.

**Mercury Recording Equipment** has gone to great lengths to recreate the pride and passion of the past, both sonically and aesthetically, while offering the reliability of a modern build. The choices made in looks, layout, functionality, features and build quality all answer back to one question: How would "they" have done it today? So, the **Mercury 66**, like all Mercury products, has no I.C.'s (chips), and is proudly hand built and or assembled in the USA. Using no-compromise parts / components and has transformer balanced input and outputs. As well, with the Vintage style VU Meter, large bakelite knobs, powder coated chassis and front panel the **Mercury 66** has a very distinctive 1950's aesthetic so that they look as good as they sound!

Some might ask, Why recreate one of the most complicated pieces of recording equipment ever made? The **Mercury 66** has a massive, custom power supply transformer, a choke, 3 audio transformers, a control amp transformer and 8 tubes squeezed into a 3U chassis. All together the **M66** weighs in at 38 pounds for a mono amplifier! The answer is: **Mercury 66 Studio Limiting Amplifier** is based the classic Fairchild 660 limiting amplifier because we were inspired buy the unique sound that only this can circuit deliver to your audio signal path. There is truly nothing else like it. Proudly, using parts that are available today, we have met all the original specifications, but most importantly, the **Mercury 66** sounds like a Fairchild 660.

Its performance features include: exceptional tone and musical focus; absence of audible thumps, distortion or noise; extremely fast attack time that can produce full limiting in 1/5000th of a second; variable release time from .3 seconds to 25 seconds; useful as a limiter or a compressor depending on the program material and control settings; reliability and stability (All components operate well below their rated maximums); all tube, fully balanced (push-pull) transformer coupled circuitry; and simple, easy to use controls.

The **Mercury 66 Studio Limiting Amplifier** uses a single push-pull stage of amplification which is transformer coupled input and output (XLRs with no capacitors in the signal path) with a high control voltage. The result: the unit never produces any audible thumps, and has low distortion and noise under all conditions (either as a limiter or straight through amplifier). The Control amplifier is also fully balanced, transformer coupled in/out. The unit makes use of a very stable high current vacuum tube voltage regulator. It has ample and accessible input, threshold, attack, release time and metering controls allowing for convenience in the control room when making adjustments. The attack time is very fast and catches short transients. The release time of .3 to 25 seconds provides real flexibility: Three positions of the six available make the release time a function of program material, with fast recovery for short duration peaks and overall reduction of program level should the program level remain high. It can be used as a limiter or compressor. For example, use it as a 2 to 1 ratio compressor with a threshold 5 dB below average level, or as a peak limiter with a 20 to 1 ratio with threshold 10 dB above normal program level, or anywhere between these extremes.

One notable change on the **Mercury 66** is the addition of the **DC Adjust Control**. On an original Fairchild 660 this was called DC Threshold and was on the rear of the unit (not accessible from front panel). We put that control on the front panel and labeled it DC Adjust to not confuse the Threshold function. The **DC Adjust** lets you control DC (Direct Current) in part of the circuit to give the user more control of the functionality and level of compression. This gives you the control how the amplifier reacts to the audio signal and basically how hard the compression tube 'works', allowing you to 'smash' the signal or just add a 'soft touch' of compression along with the velvet tone and overwhelming musicality of the amplifier. This is possible by turning the **DC Adjust** to the far left (counter clockwise) on the **M66** you are adding more DC and adding more compression [or saturation] and if you turn to the far right (clockwise) you are decreasing the amount of DC and the amount compression [or saturation, for a lack of a better term and to make things easier to understand]. The best thing about this feature is you can find that 'sweet spot', for that perfect amount of compression. We like to think of this as the 'magic knob' as do most of our users and this sets the **Mercury 66** apart from the original and other compressors and limiting amplifiers available today.

#### **Front Panel Controls:**

Input Gain, AC Threshold, Attack/Release, DC Adjust, Meter Zero (Trim), Stereo Link and Power on/off Switch.

#### **M66 Attack and Release Times:**

**Position 1** - Attack [ Fast - 0.2 ] Release, in Seconds [ 0.3 ]

**Position 2** - Attack [ Fast - 0.2 ] Release, in Seconds [ 0.8 ]

**Position 3** - Attack [ Med. - 0.4 ] Release, in Seconds [ 2.0 ]

**Position 4** - Attack [ Slow - 0.8 ] Release, in Seconds [ 5.0 ]

**Position 5** - Attack [ Med. - 0.4 ] Release, in Seconds [ Auto: 2.0 peaks, 10.0 program ]

**Position 6** - Attack [ Fast - 0.2 ] Release, in Seconds [ Auto: 0.3 peaks, 25.0 program ]

**Specifications:****Transformers:** 600 ohm Input and Output**Gain:** 7 db (no limiting)**Frequency response:** 40 Hz- 15 kHz +/- 1 db**Noise:** = -74 dB below OdBm**THD:** = < 1%**Compression Ratio:** 1:1 to 1:20**Attack Time:** 1] 0.2, 2] 0.2, 3] 0.4, 4] 0.8 5] 0.4 6] 0.2 ms**Release Time:** 1] 0.3, 2] 0.8, 3] 2 sec, 4] 5 sec, 5] auto 1, 6] auto 2**Tubes:** (1) 6BC8, (2) 6V6, 12BH7, 12AX7, EL34, 5AR4 or GZ34, 5751**Rack Size:** 3U**Weight:** 38 lbs**Shipping size:** 25" x 19" x 10"

"The Mercury 66 has that thick, glommy quality that you just can't get with any other device. It's killer at taming kick drums, beefing up vocals, squashing room mics, giving that magical shimmer to acoustic guitars, etc."

- **Pete Weiss, TapeOp Magazine**

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**Mercury M66 Users** include: **Joe Chiccarelli**, **Billy Corgan** (Smashing Pumpkins), **Rhett Lawrence** (Kelly Clarkson, Christina Aguilera), **Devin Powers** (Devin Powers Music, Movie and TV Scores), **Scott Humphrey** (Rob Zombie, Motley Crue, Bon Jovi), **John McBride** (Black Bird Studios and Rentals, Martina McBride) and **Manny Marroquin**, who has used his M66 on mixes for many Gold and Platinum Artists including: Alicia Keys, Brandy, Janet Jackson, Monica, Nikka Costa and many others!