

What's All This Revision Stuff?

This article is a simplified overview of the differences between the FET compressor revision bundles offered at Hairball Audio, LLC. I will not be describing the differences in sound, as this can be very subjective. What I will describe, are the differences in the circuit. If you want to know which one sounds “warmer” or “clean”, you can search the web or reference the links below.

Throughout the 60s and 70s many changes (Revisions) were made to the original FET compressor. Some of these changes involved a redesign of an input or output stage, while others were trivial and did not affect the sound or function of the unit.

What is important to note is that **all of the revisions compress program material in the same manner**, using a field effect transistor (FET) as a voltage controlled variable resistor. The differences between the revisions can be found in the input/signal amp stage and the output/line amp stage. The compression circuit, including gain reduction control amp, was left mostly unchanged. Although in some cases the metering circuit was changed (from discrete to IC), this is not something that would affect the sound of your compressor.

The printed circuit boards (PCBs) that I recommend are the MNATs boards. Three PCBs are offered by MNATs and they cover the four major revisions. The boards offered are the Rev A, Rev D and Rev F/G. When using the Rev F/G PCB, the input option you use (transformer/IC) determines the final Rev type. Boards can be ordered on this website as part of a bundle purchase. For detailed information on these PCBs or to order, please visit mnats.net.

Basic Revision Guide

Revision A: Often referred to as a “Blue Stripe”. These units were the first commercial revision and have a silver panel with a distinctive blue stripe over the VU meter. The signal and line amp are based on the 1108 mic pre and use a FET as the first active component in each amp stage (all other revisions use a bipolar transistor). The gain reduction FET in this model has a unique circuitry around it different from all other models (notably the lack of source resistor). This results in a little more distortion that helps define the “Blue Stripe” sound. This revision also has a slightly lower threshold in comparison to later revisions (about 5db) and more gain in the amplification stages (about 5db).

The input uses an O-12 transformer and the signal is attenuated at the input with a 600Ω t-pad. The output is class A, utilizing a 5002 output transformer. This revision is rare and highly sought after by many engineers and producers.

Revision D: This revision covers the REV B thru E units. The Purple Audio MC77 and current reissue are based on this revision. Revisions C-E had a blackface front panel while the Rev B retained the silver and blue stripe panel. Changes were made

to the stage and line amps so a bipolar transistor was used as the first active component. Low noise, or “LN” circuitry, was added to this and all future revisions. Like the Revision A, the input uses an O-12 transformer and the signal is attenuated at the input with a 600Ω t-pad. The output is class A, utilizing a 5002 output transformer.

Revision F: This unit was offered in a black panel and a silver front panel similar to the revision A, but without a blue stripe. The major change to the revision F was the redesign of the output stage from class A to a 1109 style class AB “push/pull” output, utilizing a B11148 output transformer to provide more drive. Like the Rev A and D the input uses an O-12 transformer and the signal is attenuated at the input with a 600Ω t-pad.

Revision G: This revision had a silver panel with a blue badge like logo. It removed the T-pad and O-12 transformer input in favor of an IC differential amplifier and potentiometer. The output continued to be class A/B utilizing the B11148 output transformer.

Still having trouble?! Don’t sweat it. The most important aspect of building a compressor is that you have the basic knowledge, tools, and drive to learn and figure out the process. No matter what Revision you choose, you’ll have a great compressor and the satisfaction of building something for yourself.

Additional Reading:

http://mixonline.com/mag/audio_revision_history/

<http://www.gearslutz.com/board/high-end/134612-urei-1176-revision-b-c-d-e-f-g-h.html>

MNATS Website:

<http://mnats.net/>

About Amplifier Classes:

<http://www.duncanamps.com/technical/ampclasses.html>