



A-Designs Audio
HM2EQ Hammer and "Pultec Style" EM-EQ2 Comparison Guide



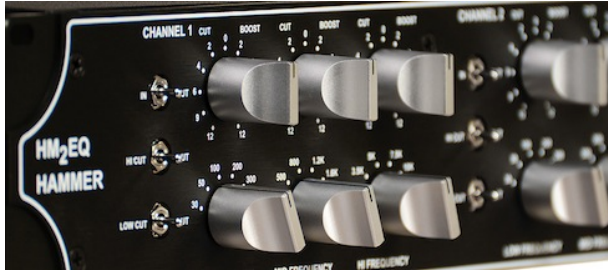
Introduction:

The **EM-EQ2** and **HM2EQ Hammer** are **A-Designs Audio's** powerful offerings for the high-end EQ user. While there are some cosmetic similarities, they are two very distinct instruments which this document intends to demonstrate.

HM2EQ Hammer

The HM2EQ Hammer is our dual mono, 3 band, semi-parametric, Solid State-Tube Hybrid Equalizer. The Hammer was designed by one of the pro audio industry's all time legends and is an ultra high performance tool for sculpting your tracks and mixes.

Filter section and Controls



-3 band Low, Mid and High bands. The Hammer has 18 selectable frequencies ranging from 30Hz to 15kHz. The low, mid, and high bands have a selectable center frequency and the bands themselves overlap in such a way that makes for a very smooth transition throughout the entire frequency spectrum.

-Boost and Cut of 12db. Very smooth on the highs at mids even at heavy levels of boost. Channel to channel matching is excellent.

-84hz Low cut switch. This filter is perfect for quickly removing unnecessary bass and sub-bass material. Overheads, Hi Hats even certain vocals or vocal sub-mixes can greatly benefit from a good high-pass filter. There's only so much room available down there!

-8khz Hi Cut switch. This feature is for quickly knocking out unnecessary high end. Kick drums, bass and even guitar amps can greatly benefit from this feature.

-Proportional Q: The bandwidth AKA "Q" is self-adjusting. Q is "proportional" to the amount boost or cut applied. The more boost or cut applied the narrower the Q becomes and vice versa. This gives the user broad and surgical capabilities. The Hammer's unique ability to have its Q float like this is one of the secrets to its highly musical response, and also a reason for why its near impossible to make the Hammer sound bad at any frequency or gain setting. This feature also makes it a very simple and fast unit to use.

-Gold Contact relay hard bypass on each channel. Bypass has zero circuitry and simply connects the input XLR to the output XLR.

Amplifier

The Hammer is a hybrid Solid State and Tube device. The input amplifier duty is handled by a high performance active, solid state circuit while the output runs through a 12AT7 triode tube configured to emphasize appealing second order harmonics and to help "smooth" out transients in a highly musical way. This creative tube technology is one of the key elements that makes the Hammer one of the most unique EQs on the market. There are engineers that run entire mixes through the Hammer with the boost/cut at zero just to add this flavor.

Applications

Mastering: The Hammer has the ability to add a touch of silky tube sound to everything that goes through it without distortion. Mastering engineers often turn to the Hammer for this very reason.

Mixing and Tracking: The mids and high end on this unit are what most engineers remark the most positively about. It provides excellent *air* at 10k and even 15k. It's no wonder that it loves electric guitars, overheads and vocals. It also finds its way onto the last point in the chain at the 2 buss output.

EM-EQ2

The EM-EQ2 is our modern interpretation of the ubiquitous Pultec EQP1a. We have taken the best elements of this all-time great yet exceedingly rare and expensive piece and optimized it for the modern studio. We also give you *two channels* for less than the price of many manufacturer's mono units without a single compromise in build or sonic quality.

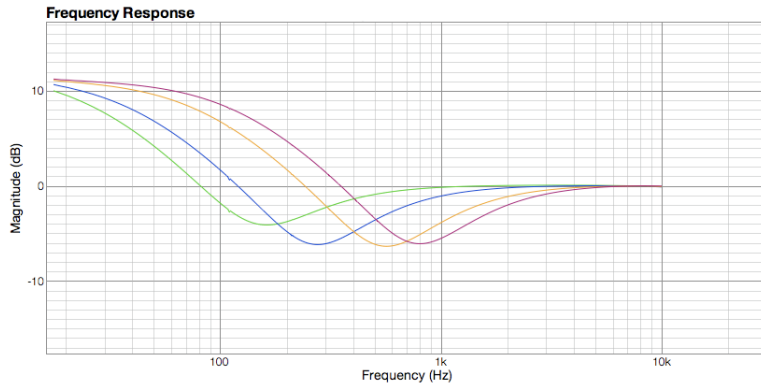
Those familiar with the old units or current plugin offerings will be able to dive right in, but for those not familiar with this type of EQ, fear not. The inherently smooth, non destructive nature of this inductor EQ is a joy to use. Just a few minutes on it will have you hooked.

Filter section and Controls



-Fully passive filter section using the same control layout as the classic units including a faithfully wound multi-tapped inductor by our *partners in iron* at Cinemag transformer.

-4 Band shelving Low EQ with boost and Cut controls. Controls may be used separately or in tandem to archive the famous "Pultec Trick" shown below. Mastering engineers worldwide rely on this EQ for giving that extra touch of bass to the low end. A 2db boost at 60hz is a magical setting on this box. The low end, in general, is the most remarked about feature on this unit.



-7 band mid and high band peaking filter with a boost control and variable Q. The Q control allows you to vary the width of the band being boosted from broad to sharp. The large multi-tap inductor in this section allows you to musically boost mids and highs more than any other eq you may have used.

-3 Band shelving high attenuator for subtle darkening of tracks and mixes.

-Gold Contact relay hard bypass on each channel. Bypass has zero circuitry and simply connects the input XLR to the output XLR.

Amplifier

The EM-EQ2 uses the amplifier from our heralded Pacifica mic pre and a hi-nickel Cinemag output transformer. Frequency response and headroom is much higher than the original tube units. This is very important in today's age of big bass. Hip-hop, rock and dance music engineers will find this especially useful.

Impedance

The original Pultec EQP1a had 600 ohm input and output impedance designed to match telephone lines and to maximize *power transfer*. Today's studio equipment is no longer based on this impedance matching, but instead on *impedance bridging* where a low impedance source feeds a much higher impedance load in order to maintain the highest level of voltage and signal integrity. The EM-EQ2 has a 48k input impedance and a 75 ohm output impedance which are both ideal for mating with today's line level equipment as well as vintage gear.

Applications

Mastering. Tightly matched channels make the EM-EQ2 an excellent choice for the mastering studio seeking a great stereo equalizer.

Mixing. The Pultec style eq is the mixing engineers go to box and a well matched stereo pair is rare so this unit sees heavy use on individual tracks and sub-mixes, especially drums.

Low end. The EM-EQ2 is well suited to low frequency material and for bringing out the best bass possible from your tracks. The optimized impedances and headroom allow for huge bass swings without distortion.

Why not both?

The use of the EM-EQ2 and Hammer in tandem has become very popular with A-Designs users. The huge low end of the EM-EQ2 combined with the silky highs and mids of the Hammer are an excellent combo.

We hope this document has helped clear up some of the differences in these two great units, but if you have any questions please feel to contact your sales contact at [TransAudio Group](http://www.transaudiogroup.com) and to visit our newly designed website at www.adesignsaudio.com

Here are links to the individual product pages

HM2EQ Hammer

EM-EQ2