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AEA RPQ Ribbon Mic Preamp Review

TRANSFORMERLESS DUAL-CHANNEL DESIGN, TONE SHAPING, MASSIVE GAIN

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The Audio Engineering Associates RPQ preamp features a unique Curve Shaper EQ section.

Audio Engineering Associates, purveyor of both single- and double-ribbon passive and active microphones, offers the RPQ — a “front-end” preamplifier designed specifically for ribbon mics. Although ribbon mics will work with most pro mic preamps, the RPQ impedance matches the ribbon mic motor’s output signal and addresses the unique set of operational requirements necessary for optimal sonic performance.

The unit has two identical preamp channels, each with an unbalanced ¼-inch out with up to +74 dB of gain and a balanced XLR out with +80 dB of gain. The balanced output is capable of +28 dBu into 600-ohm loads, and both outputs work at the same time. There are two XLR mic input jacks: One is an AC coupled for +48VDC phantom-powered mics; the second input is direct-coupled for all other mics. The two inputs cannot be used simultaneously and there is no front panel control for switching between them. If you attempt to apply external phantom power, then the nonpowered input will automatically disconnect.

For optimal ribbon mic performance without the deleterious effect of preamp loading, the RPQ has an input impedance of greater than 10k ohms. AEA opted for a direct-coupled J-FET-based design, with no transformers or capacitors in the critical input or output stages — one of the main reasons this preamp’s bandwidth ranges from 1 to 200k Hz.

The main coarse input-gain rotary switch has 12, 4 and/or 5dB steps for setting initial gain from +7 dB up to +55 dB. In addition, an output gain pot adds up to +19 dB, with the balance output amp adding +6 dB more.

Following the preamp section is a shelving equalizer with a fixed 20 dB of low cut and an adjustable corner frequency (-3dB down-point), ranging from 18 to 360 Hz. This filter is necessary to roll out rumble, “p” pops and unwanted proximity effect.

A fixed-Q, semiparametric HF section called a Curve Shaper follows the shelving equalizer. It can add more presence and “air,” extending high-frequency response. The Curve Shaper is useful for ameliorating the effects of distant mic placement or acoustically dry rooms. You can boost up to a whopping +18 dB starting at 2.1 kHz and going up to 26 kHz. The filter’s slope (not Q) varies with frequency and boost amount. The unit finishes with phase (polarity) flip, phantom-power on/off switches and a tiny three-LED “stoplight” output level meter.

At the Testing Grounds

My first test was with a Royer R-121 ribbon mic, which has a notoriously low output level in distant miking applications. I compared the RPQ to another direct-coupled mic preamp, George Massenburg Labs’ GML 8302.

PRODUCT SUMMARY

COMPANY: Audio Engineering Associates
WEB: www.ribbonmics.com
PRODUCT: RPQ
PRICE: \$1,530

PROS: High gain, low noise. Best sound possible from all mics, especially ribbons. Fantastic Curve Shaper filter/EQ section.

CONS: No line inputs. Tiny LED meter. Could use more precise front panel markings.

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I wanted to record a quiet narrator positioned three feet from the mic into Pro Tools at 24-bit/96kHz. With the RPQ, it required a total of 74 dB of gain. To get close to the same level with the GML, I had to run it flat out at 70 dB, and it was not enough to match level. To A/B the sound quality of these two preamps, I had to raise the GML track's playback level in Pro Tools. The sound differences were nil — with three sets of "golden ears" listening, we all declared it a draw.

The RPQ preamp is incredibly open, quiet and airy, with an immense dynamic range. It worked great with a Siemens-badged Neumann U47 — you could easily hear this particular mic's noise floor and its (known) tendency to be sibilant. I used 36 dB of gain to record a medium to soft vocalist about 10 inches away.

The highpass filter worked perfectly, rolling out A/C rumble and proximity on that U47. The Curve Shaper is marvelous. About 15 dB of boost at 10 kHz on the Royer mic sounded euphonicly god-like. You can hear all the air around any sound made in the room — it put me in the room with the sound source. I did find the RPQ's front panel silk-screening could use more hash markings for precise recalls.

The RPQ has no line-level input, but by inserting two in-line XLR attenuator pads (-10 dB) and setting the unit to 7 dB, I patched the mix output from Pro Tools and listened to some of my current mix projects through it. Lower than 10 kHz sounded like brightness that a mastering engineer might do, but raising the corner frequency up to around 12 kHz or above sounded (pardon the pun) brilliantly open! This is the smoothest EQ I've ever heard.

Treat Yourself

The AEA RPQ is an all-around super mic preamp. It caters to the requirements of any ribbon mic with its high gain, low noise, gigantic dynamic range and excellent Curve Shaper section.

Barry Rudolph is an L.A.-based engineer. Visit him at www.barryrudolph.com.

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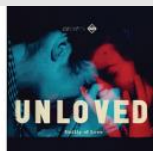
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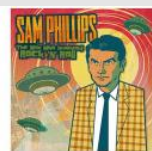
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