INTRODUCING THE VAMP
The Joule Electra
Vacuum Drive, Mosfet Output Amplifier

The VAMP was designed to meet the needs of the dedicated audiophile who does not want the hassle of a large, all tube amplifier even though he/she understands that the best sonics are available from such a beast. The circuit for this revolutionary product is derived from our very successful LA-100 line amplifier and VZN OTL's.

The driver consists of the LA-100 gain and Mu Follower coupled to a bank of Hitachi high power mosfets. The driver has one single ended gain stage and the output mosfets are arranged in a complementary single ended topology. Thus, we have a truly single ended hybrid amplifier capable of putting 100 watts into 8 ohms at very low distortion and superb transient characteristics. The result is an amplifier that has sonics that rival our famous OTL's, but is much less demanding in energy and space requirements.

The data sheets attached will give you an idea of just how good the VAMP is. Figure 1 shows the 50 cycle square wave response into 5 ohms at 50 watts. The flat top of the wave indicates flat response from 0.1 of the fundamental to 10 times the fundamental (5 cycles to 500 cycles). The slight tilt indicates a small amount of phase shift. Figure 2 shows the 5000 cycle response under the same conditions and confirms the response as flat from 500 to 50,000 cycles. At the same time the stability and total lack of ringing depicted confirm the superb transient response of this fine amplifier.

The clipping characteristics of the amplifier at 100 watts into 5 ohms is shown in Figure 3. The lower level sign wave is the other channel being driven at 50 watts in 5 ohms. The amplifier clips very smoothly and demonstrates a rounding of the output wave form rather than the flat top usually produced by conventional amplifiers. This is a result of the very careful matching of the driver stage to the output stage and allowing the tube driver to clip slightly earlier than the mosfets. The rounding of the wave form is the result and this shape is virtually inaudible when mixed with music. Our OTL's perform in much the same manner.

One thing you may wonder is why don't more manufacturers publish square wave response curves for their hardware. We will leave it to you to surmise the reason for this.

Another feature of the VAMP is separate speaker protection for each side with status leds on the front of the amplifier. This includes a time delay function which prevents turn on transients from reaching the speakers. This feature is missing from many Hi-End amps and serious speaker damage may result if it is omitted from any conventional solid state output stage.

Figure 4 shows the internals of the amplifier. Note the clean open architecture and the several power supplies. An additional supply is located underneath to power the mute/speaker protection circuit.

INTEGRATED AMP

The VAMP is also available as an integrated amplifier which is fully remote controlled. This remarkable unit has volume and balance controls and 4 line inputs, all controlled by an elegant hand held remote control. An extra stage in this version provides the necessary gain to accommodate the volume and balance controls. The overall circuit topology is similar to that used in the OPS series phono stages.

The input board uses separate double throw relays for each input. This insures that only minimal resistance is in the signal path and follows the tradition of our famous LA-100 preamps. The volume and balance controls are the constant impedance shunt to ground design that we introduced at the CES last year for the LA-100 and Vishay resistors are used in the signal path. These use potentiometers, designed by Joule Electra and manufactured in Hong Kong to our specifications.

HIGHER POWER

We will be offering higher power versions of the VAMP later this year both in monoblock and stereo versions. The stereo block version will be available at 200 watts per channel and the monoblocks will be 400 watts into 8 ohms loads. The 100 watt per channel stereo block was introduced at the CES in January this year. It was in development 9 months and is well through its teething stage. As with all other Joule Electra products, upgrades to current product status will be offered in the future at modest cost.

SONICS

We have been listening to the CES version now for about two months. We have routinely put our OTL mono blocks in our reference system followed by the VAMP. While our preference may lean toward the OTL, the VAMP emulates this suburb design so closely that we never feel short changed in any of the areas that our OTL's are noted for. They consistently produce a broad deep soundstage with excellent recovery of sonic detail and timbrel accuracy. Better yet, they can be left on for an extended period of time for background music as well as dedicated listening. The fact is they sound better than most of the transformer based tube amplifiers on the market at any price. The bass is full bodied and articulate, with beautiful texture and harmonic structure. This characteristic is a function of the tuning of the mosfet output stage, and is the secret to the overall sonic splendor of this new hybrid design.

The mid range and treble are warm and rich and the highs are open and detailed without grain or any trace of edge or stridency. You must hear this state of the art product to understand just how far our sonic superiority has progressed.

Jud & Marianne Barber - **JOULE ELECTRA**

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VAMP
Vacuum Tube Driver/Mosfet Output
100 Watts per Channel
Fully Remote Control