

Demeter amplification

6990 Kingsbury Road | Templeton, CA 93465 | 805-461-4100 | <http://www.demeteramps.com/>



HXM-1 Hx Series Microphone Preamplifier User's Guide

The Hx Series from Demeter Amplification is a revolutionary approach in tube design utilizing innovative tube circuitry for the amplification functions and the latest in solid state for the driver functions. All Hx Series equipment use the finest quality components featuring metal film resistors, high quality film capacitors, and custom toroidal power transformers housed in an attractive aluminum and steel single space rack mount case. All units feature fully regulated power supplies supplying 200V to the tubes and + and - 18V for the solid state components, giving all Hx series components tremendous head room up to +28 dB output into 600 ohms.

The HXM-1 is a two channel microphone preamplifier utilizing Jensen transformers and the revolutionary Hx Series tube amplification circuitry. Each channel has variable gain (30 to 60 dB) instrument input, low cut, phase, pad, overload indicator, volume, 48V phantom and 10 section VU with selectable sensitivity.

INPUTS, CONTROLS AND FEATURES

CH Input: instrument level input used to amplify guitars, keyboards etc. to line level. This input turns the microphone preamplifier into a tube direct box.

Low Cut: this switch inserts a 6 dB per octave low cut filter starting around 200 Hz and is down -12 dB at 40 Hz. The slow slope reduces phase shift.

Microphone Pad: this switch inserts a 20 dB pad in front of the Jensen microphone transformer; it is used to prevent overload distortion (red LED above) when the gain control cannot. it also prevents the transformer from saturating. Overload is indicated by the red LED above the switch.

Phantom: this switch turns on the 48V phantom power to microphones requiring it. This switch should not be turned on for dynamic microphones or other microphones that do not require it. It should not be turned on for any microphones plugged into the 1/4" TRS inputs in the back of the unit or damage to microphone may result. Phantom on is indicated by the yellow led above.

Phase: this switch reverses the phase of the microphone input. It can be used to match phase of differing inputs or as an effect to enhance a mixing of sources by canceling out some bass frequencies.

Gain: this control changes the gain (30 to 60 dB) of the tube preamplifier by controlling the amount of feedback going to the tube. The gain should be set at the lowest setting that will still produce a usable signal level. It should not be set too high or the unit will overload (red LED) and distort. If turning down the gain does not stop overloading, use the microphone pad switch. It is OK for the overload LED to flicker occasionally.

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Volume: this control is a fader between the tube microphone preamplifier and the balanced line driver. It's setting does not effect overload. It should be set near its maximum setting and used only for fine tuning signal level or for fades in or out.

Meter: this switch controls the sensitivity of the VU LEDs and is calibrated for +4 dB out and -10 dB in.

Overload: this LED indicates if the signal level of the tube amplifier is near reaching its distortion level. it is set to start flickering 6 dB before distortion is reached. A little flickering is fine. The gain must be lowered or Microphone Pad engaged if the LED is constantly on.

Phantom LED: this yellow LED indicates that phantom power is being provided to the microphone input.

VU: This row of LEDs indicate the output level going to the balanced line output jacks in standard volume units. The level is indicated above each LED. There is no distortion if you go past 3 VU. The microphone preamplifier has over 18 dB more headroom above the meter's highest indication.

REAR PANEL

Voltage Selector: selects mains voltage 115 volts U.S.A. and 230 volts for Europe. **WARNING:** damage to this equipment will occur if this switch is improperly set.

Fuse: 1 amp @ 115 volts and .5 amp at 230 volts regular blow.

Output: balanced three pin XLR connector and balanced TRS 1/4" phono jacks. **WARNING:** do not hook up output connectors to any inputs that have 48 volt phantom appearing on them. This will damage the units output circuitry.

Input: balanced Jensen transformer inputs on both three pin XLR and TRS 1/4" phono jacks. **WARNING:** turn off 48 volt phantom when using TRS 1/4" jacks. Damage will occur to the microphone when using unbalanced microphone input cables.

HOOKUP TIPS

1. Make sure that the tube microphone preamplifier is connected to inputs that are designed to operate at line level, otherwise distortion could result.
2. Avoid ground loops. If hum occurs it may be necessary to telescope some grounds. This is done by cutting the ground wire on only one side of the three pin XLR connector.
3. Keep wiring short and neat.
4. Make sure AC grounds are properly connected.
5. Don't hesitate to call the factory or your Demeter dealer with any questions. We are here to help.