

AudioSimplified **HOT HEADS**

Hot Heads came about after a remote session where I needed a box that would let a performer do overdubs without necessitating a console. Hot Heads is that and so much more.

Two channels of premium mic preamp/DI and a high power headphone amp with a monitor mixer serve a number of studio functions. Adding the Dante option turns Hot Heads into a complete audio interface.



Hot Heads Beta Version

Overview

Mic Preamps:

- THAT 1580/5171/1606 low noise, high headroom chipset featuring digital gain control, dc servos and transformer like balanced output.
- The chipset is managed by an internal computer, allowing gain to be varied in 1 db steps from -8dB to + 73dB by integrating the pad control and gain control using a single knob.
- The signal path is fully differential input to output, with a unique dc coupled front end.
- Phantom power is monitored by the computer and turned off if line unbalance is detected to protect the microphone. This is designed to catch mis-wired or broken mic cables.
- When an external preamp is selected, external phantom is monitored and the mic is isolated from the preamp if any fault is detected.
- The phantom power defaults to the off state to protect ribbon and dynamic mics from being accidentally plugged into a live phantom circuit.

Instrument Preamps (DI):

- Input impedance is variable from 125k to 3M Ω to best match your instrument.
- Gain is adjustable from 0dB to 30dB.

Line Inputs / Monitor mixer:

- Balanced or unbalanced inputs
- headphone modes: stereo, left only, right only, mono, mix-minus (left minus right), reverse stereo

Headphone Power Amps:

- Power level is switched by computer to match headphone impedance
- High dynamic range, low noise, low distortion headphone amps
- 3w @30 Ω /chan, 150 mw at 1500 Ω /chan
- Output DC protection & turn on delay 1 $\frac{1}{4}$ " & 1/8" jacks

Power:

- Low noise universal power supply built in. (No wall wart!)

Hot Heads Possible Usage Scenarios:

Practice Amp:

- Mic to mic input
- Instrument to Instrument input
- Mobile device or computer to stereo line input.
- Headphone mode to L-R removes most vocals on practice track.
- Musician can sing and play to track with ability to balance headphones to taste.
- If desired, track can be passed to second Hot Heads for another musician via buffered stereo line out.

Audio Simplified Studio:

- Mic to mic input
- Mic output is passed to board at line level. (Alternatively, unit can be switched to Mic thru mode. The Internal mic preamp becomes monitor only, the board supplies phantom power and recorded mic preamp.
- Instrument to instrument input, instrument output is passed to board at line level, eliminating the need for a mic preamp. Instrument loop output can be patched to remote amp.
- Studio monitor system feeds line inputs, can be stereo, mono, or dual mono.
- Performer hears latency free voice and instrument, could also be mixed with full mix from board for "more of me approach".
- Stereo Monitor loop feeds additional units for complete studio system.

Studio Drummer:

- Room mic to mic input for good communication with band, also allows drummer to hear drums in natural acoustics.
- Mic output is passed to board at line level, if desired.
- Metronome to instrument input allows drummer to set his own click level.
- Metronome output is passed to board at line (or mic) level to print to track, if desired.
- Metronome loop output can looped to other PMAs via unbalanced loop output.
- Studio monitor system feeds balanced inputs, can be stereo, mono, or dual mono.
- Stereo Monitor loop feeds additional units for complete monitor system.

Live:

- Mic to mic input
- Mic output is passed to board at line level.
- Instrument to instrument input, Instrument loop output can be patched to amp, buffered signal allows longer line.
- Instrument output is passed to board at line level.
- Monitor system feeds line inputs, can be stereo, mono, or dual mono.
- Performer hears latency free voice and instrument, could also be mixed with full mix from board for "more of me approach".