

- SMc Audio -

Hand-Tuned Performance by Steve McCormack

McCormack Micro Headphone Drive & Micro Integrated Drive Upgrade Information

The Micro Headphone Drive (MHD) and Micro Integrated Drive (MID) are slight variations of the same design. The Micro Headphone Drive was conceived as a high-performance headphone amplifier that would also double as a “minimalist” preamplifier. Having designed it as a true MOSFET power amplifier (albeit a rather low-powered one), I found its performance with appropriate speakers impressive, and so the Micro Integrated Drive was born. The MID includes traditional speaker connections (5-way binding posts on the rear) and MOSFET output devices better suited to driving loudspeakers, while maintaining excellent performance with headphones. I should point-out that, although the Micro Headphone Amplifier is capable of driving some high-sensitivity speakers, I do not consider it appropriate for this use. Stick to the Micro Integrated Drive if you want to drive speakers.

Both the MHD and MID will deliver enough power to drive any dynamic headphone available – even the difficult AKG K1000 ‘phones. When coupled with the high-current version of the optional Micro Power Station power supply (details below), the MID is surprisingly effective with an appropriate set of small, high-sensitivity speakers. Several MID owners have commented that the high-frequency performance is the sweetest, most delicate and extended top-end they have heard.

These Micro amplifiers are versatile and deliver impressive sound quality. With the addition of the upgrades offered here, they offer state-of-the-art performance as a headphone amplifier, small power amplifier, and preamplifier. No other piece that I am aware of delivers so much in such a small, elegant package.

- Upgrade Options -

SMc Audio offers 2 levels of upgrade for these Micros: Revisions A & B. In addition, there are options for upgrading the RCA jacks, speaker binding posts, and a special volume control option. Finally, we offer the Micro Power Station as an upgrade replacement for the original “wall-wart” power supply. Here are the details...

Revision B

Rev B focuses on the heart of the circuit – the volume control and critical amplification circuitry. The stock volume control is replaced with the TKD conductive-plastic volume control – the finest volume potentiometer I have found. Vishay and Mills resistors are

employed in critical circuit locations, along with Muse and Black Gate capacitors. Wonder Wire is used for the internal connections, and Wonder Solder is used throughout.

All mechanical and electrical systems are checked for proper assembly and operation, and each unit is burned-in and listened-to before shipping.

The result is an outstanding amplifier with great transparency, dynamics, and dimensionality. The sound is very clean, with great speed and agility, and taut, powerful bass.

Revision B: \$400

Revision A

While Revision B is a rebuild of the existing circuit, with Revision A we wipe the slate clean and start again. The amplification circuit is completely rebuilt around the Burr-Brown OPA627 op-amp - the finest-sounding op-amp I have ever found. The power supply regulators are upgraded with JFET current sources and MOSFET pass transistors. The TKD conductive-plastic volume control is installed, and the entire circuit path is upgraded with the latest parts, including Mills and Vishay resistors, along with Muse and Black Gate capacitors. The latest soft-recovery diode rectifiers finish the job.

The result is a marvelous amplifier with great transparency, dynamics, and dimensionality. The sound is relaxed, liquid and full, but with great speed and agility, and taut, powerful bass. Backgrounds are "black" and grain-free. Compared to Rev B, Revision A results in important gains in relaxed liquidity and dimensional bloom. Bass solidity is also improved, along with the sense of pace and timing. This is an amplifier you can kick-back with for a long time, while enjoying the best that today's incredible headphones have to offer.

As usual, all mechanical and electrical systems are checked for proper assembly and operation, and each unit is burned-in and listened-to before shipping.

Revision A: \$725

Connector Options:

The stock Micro units come with good quality RCA jacks and basic, plastic-bodied binding posts (MID only). I suggest that you consider upgrading these connectors with the high-performance options below – at least for those jacks that you use most.

WBT RCA jacks are beautifully engineered, and they deliver the goods sonically, as well. They combine fast, detailed, and transparent sound with a degree of "body," warmth, and richness I have not found in any other jack.

WBT RCA jacks: \$60 per pair

Cardas RCA jacks are a classic in the High-End industry. I've used Cardas jacks for many years, and still love them. Fast, detailed, and transparent, their musical performance is excellent.

Cardas RCA jacks: \$30 per pair

Cardas Speaker Binding Posts are still the finest-sounding speaker connections I have found. I offer both "standard" and "deluxe" versions. Both are excellent, but the "deluxe" version offers superior metallurgy and slightly better sonic performance. Note that the price includes the installation labor.

Standard Cardas Posts: \$70

Deluxe Cardas Posts: \$110

The Final Option: The TKD Stepped-Attenuator

The TKD conductive-plastic volume control is the best true potentiometer I have ever heard. Its tracking is quite good, and the sound is wonderfully smooth and rich, while exhibiting fine detail and "air." However, there is one control that is better still: **the TKD Stepped-Attenuator**. This is simply the finest volume control I have found. Its tracking is as close to perfection as I have seen, and it has enough steps (40) to allow precise control of your volume level. The improvement in bass depth and power, transient definition, precision focus, and staging with this control is amazing. There is only one drawback... it is expensive - but the result is truly incredible performance!

Install the TKD Stepped-Attenuator (with upgrade): \$375

Install the TKD Stepped-Attenuator only: \$475

Add the resistor bypass option for improved performance: \$50

The Micro Power Station

The Micro component series originally came with a good-quality "wall-wart" power supply. While it provides good performance in most circumstances, I wanted to offer a superior power supply for use in high-performance audiophile systems.

The Micro Power Station is built around a premium-grade toroidal power transformer. Housed in a compact (8"L x 5"W x 2"H), handsome gray chassis, it includes an XLR-style power connector and a removable IEC-type AC power cord. High-quality film capacitors provide internal noise filtering. A blue power-indicator LED on the front panel completes the unit. We provide a 6' custom power cable with XLR and coaxial DC power connectors for your Micro unit.

We offer the Micro Power Station in 2 versions: Standard, and High Current. The High-Current version is intended for use with the Micro Integrated Drive when it is used for driving speakers. With the High-Current MPS, the Micro Integrated Drive will deliver almost 10 Watts RMS per channel into an 8 Ohm load.

The Micro Power Station provides your Micro components with a nice improvement in bass depth, dynamic expression, and the overall sense of pace and rhythm.

Micro Power Station:	Standard version	\$275
	High-Current version	\$375

Please call us at (760) 732-0352, M-F, 10-6 PST (California) to discuss which upgrade will best suit your requirements and to arrange scheduling and shipping details.

Applicable CA tax and shipping not included. Please make your check or money order payable to **SMc Audio**.

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