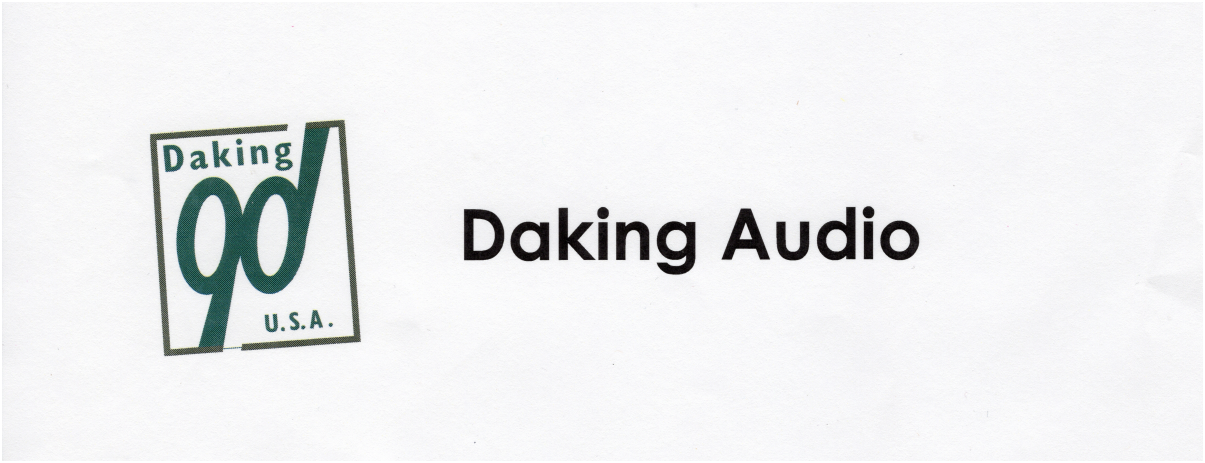


Mic Pre II
Microphone Preamplifier
User Manual V.1

http://www.daking.com/

Safety Considerations

• Read, follow and keep these instructions.

• Heed all warnings. Install in accordance with the manufacturer’s instructions.

• Protect device from liquids and spills.

• Clean only with a soft, dry cloth

• Do not block any ventilation openings.

• Do not install near any heat sources such as radiators, heat registers, stoves or other devices (including amplifiers) that produce heat.

• Do not defeat the safety purpose of the grounding-type plug. A grounding-type plug has two blades and a third grounding prong. The third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

• Protect the power cord and all connecting cables from being walked on or pinched, particularly at plugs, receptacles, and the point where they exit from the device.

• Only use attachments or accessories specified by the manufacturer.

• Unplug this device when unused for long periods of time.

• Refer all servicing to qualified service personnel. There are no user-serviceable parts inside. Servicing is required when the apparatus has been damaged, such as when a power-supply cord or plug is damaged, objects have fallen into the apparatus, the apparatus has been exposed to moisture, does not operate normally, or has been dropped.

• Do not overload wall outlets and extension cords as this can result in a risk of fire or electric shock.

1.0 About Daking Audio

Congratulations! You've purchased a Mic Pre II, a very high-end piece of gear! The Mic Pre II uses discrete transistor Class A circuits, Jensen microphone transformers, THAT Corporation differential amps and printed circuit board-mounted switches. Signal capacitors are precision polypropylene or ultra low-leakage electrolytic types. Our boards are assembled on a mil-spec assembly line. The chassis are stainless steel for maximum RF and hum rejection and a long-lasting finish. Every unit is hand-finished, tested, burned in, and tested again in a second facility.

Also, we just couldn't stand to use plastic knobs, so we designed our own anodized, engraved aluminum knobs that give a much more precise and quality feel. We designed our gear to be gear you'll own for life, not some passing fancy you'll leave in the dust once you figure out what the good stuff sounds like. This IS the good stuff.

-Geoff Daking

1.1 In The Box

•Daking Audio Mic Pre II 19" rack-mount single-space microphone preamplifier

•Outboard power supply with attached connecting cable

•Power cable

•.050" hex wrench for knob set screws

1.2 Why do I need a Mic Pre II?

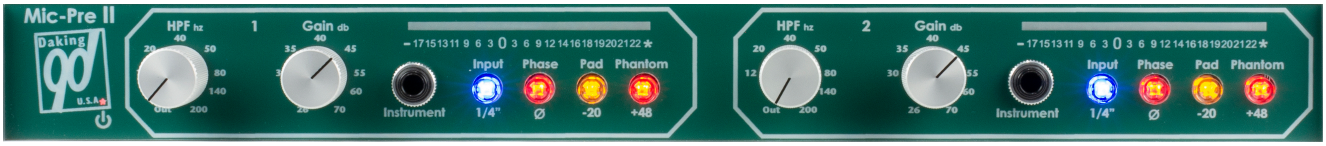
Microphones come in all shapes and sizes, they also come with different output levels. Ribbon microphones, for instance, have relatively low output level as do dynamic microphones. Phantom-powered condenser microphones, on the other hand, can have a very high level output as can tube condenser microphones. It takes a very flexible, quiet, and carefully thought-out piece of gear to make all those different types of microphones sound their best when connected to the next device in the recording chain.

Think about this: every recording console, from the cheapest starter model to the million-dollar consoles in the world's greatest studios, has microphone preamps. Most inexpensive digital audio interfaces have some sort of microphone preamps. Simple arithmetic shows that semipro mixers and interfaces must have cheap mic preamps, or they wouldn't be economical to sell. The mic preamps from classic consoles of the seventies and eighties have become very valuable as outboard equipment. Sadly, many classic old consoles have become worth more broken up and parted out than as complete consoles.

Since the 1990's Geoff Daking has been making new old-style mic preamps, equalizers, and compressor-limiters for professional users. He is, perhaps more than anyone else, responsible for the new generation of 'boutique' preamp makers. As a recording engineer he has owned and had hands-on experience with many classic recording consoles. He analyzed the things that characterized those consoles, and the reasons we loved the sound of them so much. Newer consoles, both cheap and expensive, were being manufactured with chips and without transformers in the preamps to save money. Geoff realized he could build professional microphone preamps in America using high-quality input transformers and discrete circuitry at a price that most users could afford. Their sound quality rivals the great classic console modules at prices that are much more approachable, and without the maintenance headaches that 40-year-old switches, capacitors, resistors, connectors, and obsolete components can cause.

The Mic Pre II is the latest in the line of Daking products that live up to that promise. It features input transformers made by Jensen, perhaps the premiere transformer maker in the world today, high quality capacitors, resistors, and discrete transistors, built in the USA. Get ready to really hear your microphones for the first time!

1.3 Front Panel



High-Pass Filter (HPF)

Low frequencies are the most difficult to reproduce. Unnecessary low frequencies can be a problem for speakers to reproduce and a strain on power amplifiers. Modern microphones and digital interfaces can record frequencies down to 10Hz, which analog tape can't do. So a way to eliminate unwanted low frequencies has become very important. A high-pass filter is literally a filter that passes frequencies higher than a designated point. The Daking Mic Pre II has a filter that's variable from 12Hz to 200Hz as well as an 'out' position. You can use it to filter out rumble from air conditioning on vocal tracks, boominess from acoustic guitars, or anything that's muddy from too much low end. For instance on a female vocal you might filter out everything below 80Hz. Use to taste, you will hear when you're starting to change the sound of whatever you're recording as you filter higher frequencies. Many of us work in small studios these days with nearfield monitors that can't reproduce the very lowest frequencies your mics can pick up. The HPF protects you from recording low frequencies you can't hear and don't want.

Gain Knob

The Gain knob controls the amount of gain added to the signal. Plug in a microphone and assess the input level you are getting. Turn up or turn down the gain until you get a good signal level on the meter with no overload indications.

Instrument Input and Input button

The 1/4" input on the front panel is a direct input for guitar, bass, or keyboards. Plug in your instrument and press the Input button to switch the input from the XLR input on the back panel to the 1/4" input on the front.

Phase

The Phase button reverses pins 2 and 3 of the associated input XLR connector on the back panel. This will allow you to easily check the phase coherence of the input signal with your other microphone inputs and correct it if needed. If you have a mis-wired cable or microphone (it happens!) the phase button will allow you to compensate.

Pad

The Pad button inserts a 20dB attenuator in the signal path before the input. You may find that some input signals are so loud (“hot”) that no matter how low you turn the Gain control the signal still overloads and/or distorts. Engage the pad switch and you will lower the signal by 20dB before the Gain control. Then you can bring the Gain up to a usable level without distortion.

Phantom

Phantom is a 48V power source that many transistor condenser microphones and a few tube microphones require to amplify the signal present at their capsules. Dynamic microphones and ribbon microphone in general do not require powering, although there are a handful of exceptions. Press the button and 48V Phantom power will be applied at the input connector for the microphone. Be certain that you are using high-quality cables with high-quality connectors, and that your cables are in good repair. In certain rare instances phantom power applied through a defective cable to a ribbon microphone that doesn’t need it can cause damage to the mic.

Meter

The Meter on the Mic Pre II is a true VU Meter with 300ms averaging ballistics. The main difference between this LED meter and a mechanical VU meter is that this meter extends to +22dB, while a mechanical meter only goes up to +3dB. This feature allows the engineer to see level above +3dB with much greater accuracy and detail. The Meter also has a floating peak indicator which shows the peak level with a single LED light and the average level with a series of LEDs. The highest point on the meter is labeled with an asterisk (*) which is the overload indicator. When this LED is lit, the signal has reached or exceeded +23dBu. Most audio interfaces will clip at +18dBu, while most professional mixing consoles will clip between +24dBu to +30dBu.

NOTE: While VU meters are usually calibrated to 0dB VU = +4dBu, this meter is a true dBu meter where 0dB on the meter is in fact 0dBu. This means that when the Mic Pre II's meter is reading 0dB and you patch into another standard VU meter directly from the mic pre you will show a reading of -4dB.

1.4 Back Panel

Audio Inputs and Outputs

The back panel contains balanced XLR inputs and outputs for each channel, as well as a balanced 1/4" TRS output connector for each channel which is wired in parallel to the XLR output. If you want an unbalanced output you can use a 1/4" TS cable (a guitar cable) in the TRS jack. If you use both an XLR output cable and a 1/4" TS cable at the same time keep in mind you will be making the XLR output unbalanced because they are in parallel. Always use high-quality connectors and cables to wire the Mic Pre II into your system. Wiring is not the place to skimp.

Power Inlet

There is a power inlet on the back panel for connection to the power supply included with the unit. Please run power cables away from foot traffic, in a place where they're not likely to be kicked out or tripped over.

1.5 Mic Pre II Specifications

- Jensen transformer-balanced inputs
- THAT Corporation differential output amps
- Discrete transistor circuitry
- Class A amplifiers for the preamp and High-Pass Filter
- 70dB of gain
- Continuously variable Gain Control
- 20 segment LED VU Meter (-20 to +25)
- +23dBu overload indicator
- Floating peak indicator
- All relay switching with gold bifurcated contacts
- Switchable +48 Volt Phantom power
- 20dB pad on mic input
- All-metal construction with stainless steel chassis for noise immunity
- Custom aluminum knobs
- Power supply included
- Inputs: 2 x XLR, Outputs: 2 x XLR, 2 X TRS
- 1U 19” rack-mount case: 17” (43.18cm) width, 8.375” (21.27cm) depth, 1.625 (4.13cm) height.
- Unit weight: 5.35 lbs. (2.45 kg)
- Box weight: 8.70 lbs. (3.95 kg)
- Box dimensions: L: 29” (73.66cm) (736.6mm)
  W: 14” (35.56cm) (355.6mm)
  H: 6” (15.24cm) (152.4mm)

Specifications are subject to change without notice.