

# CHANDLER LIMITED®

## GERMANIUM PRE AMP/DI

Thank you for purchasing the Chandler Limited Germanium Pre amp/DI. This unit is proudly hand wired and assembled in the USA. This unit is made with a 100% discrete transistor circuit and specially wound transformers. Included are item descriptions and hints to get you on your way.

**For peak performance, please allow the unit to warm up for at least 25 minutes before use.**

Please feel free to call our shop anytime for help or questions.

Prior to sending in your gear for repair, please contact our shop at the number below. We will assist you in troubleshooting the problem and if needed, we will issue you an RMA# to send in the gear.

Send repairs to: Chandler Limited, Inc.

Attention: Repairs

222 S. Cherry St.

Shell Rock, IA 50670

Phone: (319) 885-4200

Email: [support@chandlerlimited.com](mailto:support@chandlerlimited.com)

Connections - All connections on the Germanium are transformer balanced with pin 2 hot.

Power supply - This is designed to be used with Chandler Limited PSU-1 MKII power supply.

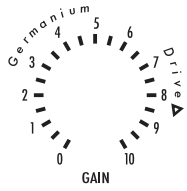
The power pin out is as follows:

- 1) chassis and audio ground
- 2) 48 volt
- 3) +28 volt
- 4) -28 volt

Notes on Grounding - The back of the power supply has two black banana connectors. These join the audio ground to the earth ground with a solid wire between them. Depending on your studio you may want to connect or disconnect this. Turn up your monitors or headphones to experiment with which has a lower noise floor in your system. You may also need to join the audio banana plug to other sections of your studio to obtain the lowest noise floor. The connectors are located near the closest edge of the power supply case. Use something simple, like a guitar cord, and touch the tip to other portions of your studio to find the best results.

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## Controls and Features



**GAIN/GERMANIUM DRIVE** - This is your standard input gain control. It is a 10-position Elma switch with 3db step increments. The full range of the unit is -5db, with the pad, to +65db, without the pad and Germanium Drive and Feedback at full. The actual amount of overall gain, however, is affected by feedback control. When the gain is at 0 and the feedback is at 0, the overall gain is +10db. Increasing the feedback to 10 changes the overall gain to +40db, with all the tonal changes described under the feedback control. Using different combinations of feedback and input gain is essential if you want to take advantage of all the tones available from the Germanium pre amp.



**FEEDBACK** - The Feedback control is essential to the sound and function of this pre amp. Audio amplifiers incorporate some amount of negative feedback which is where the output signal of the amplifier is fed back to its input. This affects the sound and function of the amplifier in many ways. THD, frequency response, gain, and amplifier stabilization change considerably with varying feedback.

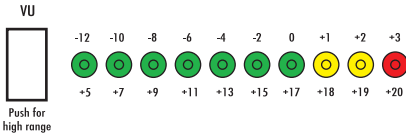
In use you will find these results: When feedback is at 0 the unit will produce more high frequency information, less THD, less gain, and generally a more pristine clear tone. Pushing the feedback higher will add THD, gain, a small bass rise, and a small hi end roll off.

**PAD** - A 15db pad switch. Do not be afraid to use the pad on the unit as you will not find the adverse effects associated with many pads. The pad is also very helpful with discovering all the tonal variations the Germanium is capable of producing. Use the pad when you are driving the Germanium very hard to keep the output levels in a usable range. Another important use for the PAD is to drop the gain to a line level while sending tape/disk tracks or line sources into the transformer balanced rear input.

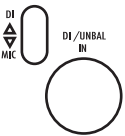
**THICK** - The thick switch adds a gentle low end rise to the signal. It sounds simple but all of our beta testers commented about this being their favorite part of the unit. One said "Why don't you just wire it in permanently?" "It's great for making large, meaty guitars."

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## Controls and Features continued



VU METER - An LED meter that functions in two ranges. The ranges are from -12 to +3 and +5 to +20db. You can select the range with the pushbutton to the left of the meter.



DI/UNBALANCED IN - This is an unbalanced input for guitar, bass, samples, etc. Simply throw the toggle switch and you're off.

48 VOLT SWITCHING - 48 volt switches phantom power.

PHASE - Reverses the polarity of the pre amp's output.

### SPECIAL NOTE ABOUT THICK -

In some cases, when extremely high gain and feedback are used with transformerless microphones, you may get oscillation from the Germanium pre amp. This is a very rare occasion, but we thought it was worth mentioning. This was not compensated for in the final design for two reasons. First, any correction of this changed the sound of the pre amp. Second, it happens in VERY rare times when a combination of Gain, Feedback, Thick, and a transformerless mic is used, and all oscillation can be removed when the PAD is engaged.

### EXAMPLE SETTINGS-

