Ai ProTube OWNER'S MANUAL

Thank you for your purchase. We have developed a quality DI with preamp for use by professional musicians. With the addition of our proprietary tube circuit, you will be amazed by the full rich tone you can get from this one of a kind Preamp/DI.

Features: The **Ai ProTube** is a quality DI and full-featured preamp with active tone controls. You will be able to dial in your clear natural acoustic sound and route it through a balanced XLR output or unbalanced standard line output to the PA sound system. We also added a "Tube Circuit" that utilizes a 12AX7A tube to give the Ai ProTube a warm rich tone for all of your acoustic instruments.

Getting Started:

Power Requirements: 13 VAC
This unit requires more power than a standard "pedal" because of the tube circuit and "high headroom" preamp circuitry, so it must be connected to the power supply in order to operate.
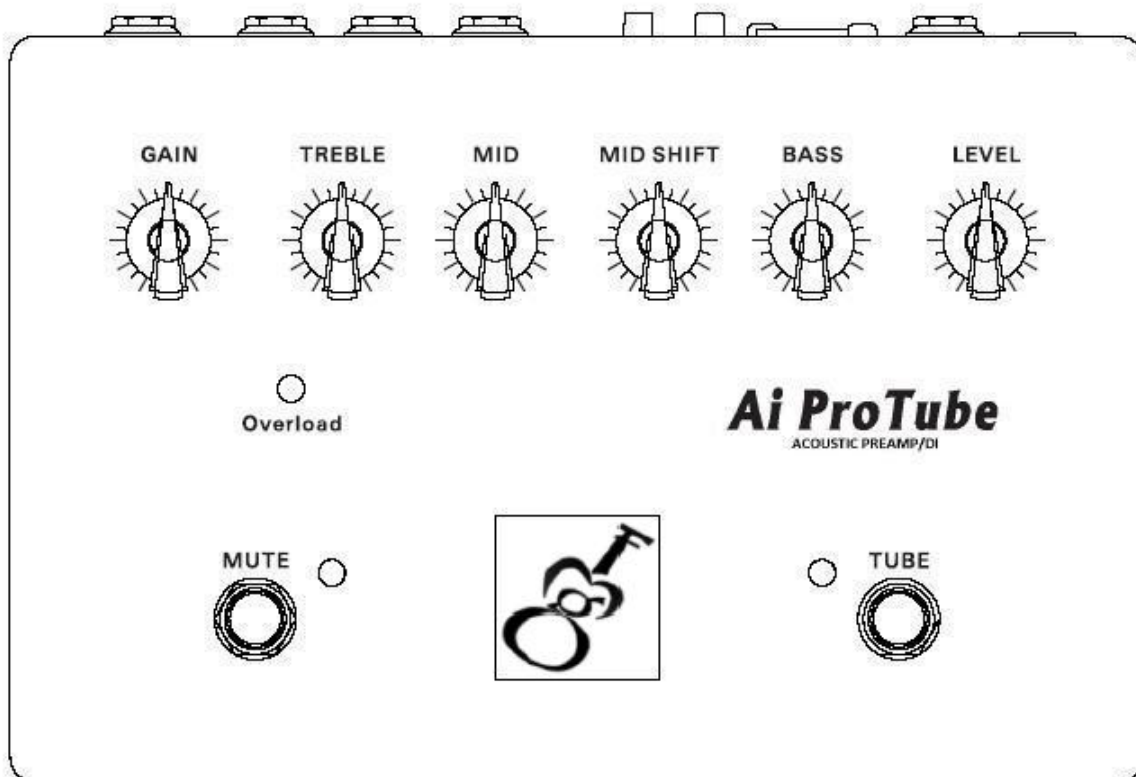- **Power Supply:** 13V AC , 1A

Initial Setup
Begin with all of the knob controls at the mid point (12:00 o'clock) with the **"Ground (GND) LIFT"** switch **"OFF"**. The **"PHASE"** switch can be in either the **"IN"** or **"OUT"** position.
This initial setup will provide a medium gain setting with FLAT frequency response.
Each control is fully explained in the next section.

Control Panel

Power is supplied to the Ai ProTube via the 13VAC power jack, the tube window will illuminate when the unit is activated. (It will take a few seconds for the tube to warm up)

1. **GAIN:** is the first control you should adjust. It is not a volume control. The "**GAIN**" sets the level of amplification applied to the input signal to boost it to a useable level. This adjustment allows for a wide range of pickup devices. You will want to use the highest "**GAIN**" setting you can without overdriving or distorting the signal. (See **Overload** below) This will give the ProTube the most signal to work with and the best signal to noise ratio. If you are using a high output active pickup system you will likely want to use a lower setting on the "**GAIN**". If you are using a passive type pickup system you will likely need a higher setting on the "**GAIN**".

2. **TREBLE:** Adjusts the amount of cut or boost in the high frequency (5kHZ) range.

3. **MID:** Adjusts the amount of cut or boost in the mid frequency range.

4. **MID SHIFT:** Adjusts the frequency of cut or boost of the **MID** control. (250HZ-3.5KHZ) range.

5. **BASS:** Adjusts the amount of cut or boost in the low frequency (100HZ) range.

6. **LEVEL:** Adjusts the amount of signal sent to the Outputs (**DIRECT OUT**, **LINE OUT)**.

7. **Overload:**– This indicator will light up if there is an overload/overdrive situation. The ProTube has a proprietary sensing circuit that monitors the signal level at various points in the signal path and will indicate if there is an overload situation in any of these critical points along the signal path.

   - At the input
   - After the **GAIN** control
   - After the Effects loop

   If an overload situation occurs, it is simple to adjust your instrument or ProTube unit to eliminate this. First turn down the **GAIN** control, this will usually eliminate the overload situation. If the overload still exists, even with a low setting on the GAIN control, turn your Instrument volume down. It will be very rare that your instrument will have enough output to overload the input, but it can happen. When using the Effects Loop, you may be able to overload the circuit if the effects you are using have a high output signal. To best way to remedy this is by decreasing the level of your effects output.

   Special Note: If you are using an effect that squares off the signal, like a distortion or overdrive pedal, the ProTube will sense this and can give an overload reading even if the signal level is below the overload threshold.

8. **MUTE:** – This footswitch is used to mute the output of the ProTube. No signal will pass to the **DIRECT OUT** or **LINE OUT** jacks when the mute is on. There will be signal available at the **TUNER OUT** jack when the mute is active. This is very useful on stage when you want to tune your instrument without being heard through the PA. The Mute indicator LED will illuminate when mute is active.

9. **TUBE:** – This footswitch is used to turn the internal tube circuit on and off. The proprietary tube circuit of the ProTube gives a slight boost to the output signal while adding the much desired warmth and dynamics that only a tube can provide. The "Blue" LED next to the switch will illuminate when the tube is activated.

Input Output Panel:
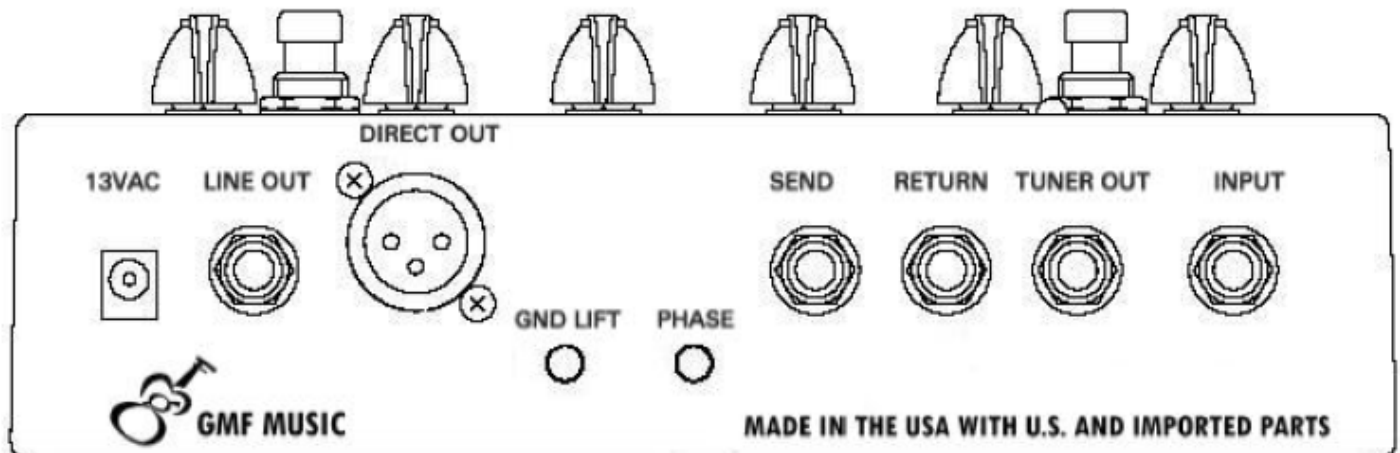
1. **13VAC:** – This is the power supply input. A 13VAC power supply must be used for the ProTube.

2. **LINE OUT:** Plug a standard instrument cable from a stage monitor, amp, or mixer into this unbalanced output. Use the "**LEVEL**" control to set all ProTube output levels to best match your sound system and give you the least amount of noise.

3. **DIRECT OUT**: Plug a standard XLR cable from your PA or recording console into this low impedance balanced output. Use the "**LEVEL**" control to set all ProTube output levels to best match your sound system and give you the least amount of noise.

4. **GND LIFT:** If you have multiple grounds, you may have hum or ground loops. Disconnect the DIRECT OUT ground by **switching "ON" the Ground Lift** to eliminate this problem.

5. **PHASE:** affects the way the signal mixes live and when recording. If you experience "positive acoustic" feedback, flipping the phase switch to the alternate setting will kill the feedback.

6. **SEND:** The signal on the **SEND** jack is post input gain and pre EQ. This means that you can use the **SEND** signal as an auxiliary unbalanced direct output. This signal is not affected by any of the panel controls with exception of the "**INPUT GAIN**" control.

7. **RETURN:** A plug inserted into the **RETURN** jack will interrupt the signal path. The signal on the tip of the plug inserted into the **RETURN** jack will be the signal that the **DI PLUS** will process.
   SPECIAL NOTE: The SEND and RETURN jacks form a real world "EFX LOOP". In an effort to save room, most of our competition uses a TRS jack (tip, ring, sleeve) and Y cable type system. We provide you with two 1/4" jacks, one for "SEND" and one for "RETURN". Since the EFX LOOP interrupts the signal path it can be used as an insert point for a volume pedal, compressor, or tuner, if the tuner is equipped with a bypass switch.

8. **TUNER OUT:** The TUNER OUT jack provides an unbalanced instrument level signal to be plugged into an outboard tuner. There will be signal available at the **TUNER OUT** jack when the mute is active. This is very useful on stage when you want to tune your instrument without being heard through the PA. The Mute indicator LED will illuminate when mute is active.

9. **INPUT:** Plug in an instrument here with a standard ¼-inch instrument cable. If you have a passive undersaddle pickup (no battery onboard), use as short a cable as possible to minimize the loading affect of the cable.

Specifications:

Input:

Connector:	Standard ¼" TS Jack
Impedance	1M ohm

LINE OUT:

Connector	Standard ¼" TS Jack
Impedance	510 ohm

DIRECT OUT:

Connector	XLR Balanced
Impedance	100 ohm

Dimensions	7.75" x 5" x 3" - (197x127x77)mm (Including knobs and jacks)
Weight	2.2 lbs. – 1Kg

Block Diagram:
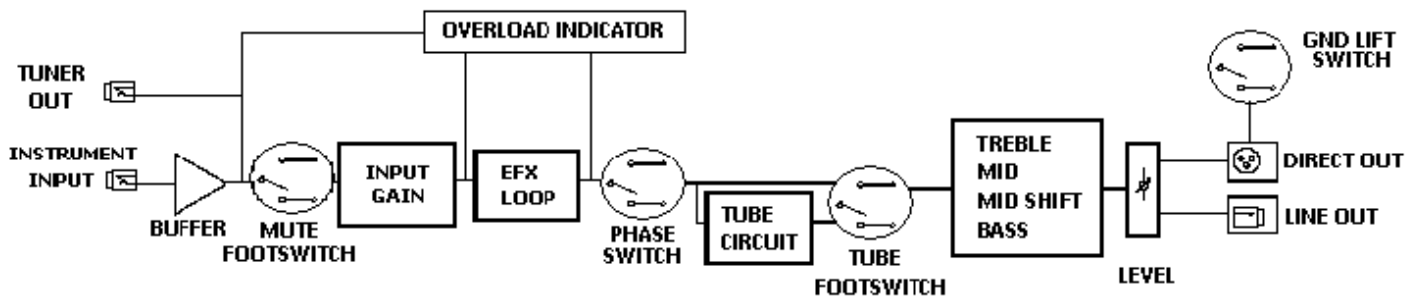
Precautions:

1) Read and follow these instructions before operating the unit.
2) Please heed all safety warnings and keep these instructions for future reference.
3) Do not use this apparatus near water or moisture.
4) Clean only with soft, dry cloth.
5) Do not install near a heat source such as radiators, hear registers, stoves, or other apparatus that produce heat.
6) Only use attachments/accessories specified by the manufacturer.
7) Refer all servicing to qualified service personnel.
8) Use provided AC adaptor for ultimate performance.