

**iSP**  
Technologies

**STEALTH  
ULTRA-LITE™  
POWER AMPLIFIER**



**OWNERS MANUAL**

# INTRODUCTION

Congratulations on your purchase of the STEALTH ULTRA-LITE™™ Power Amplifier. The STEALTH ULTRA-LITE™™ Power Amplifier was designed to provide a new level of power amplifier performance. The STEALTH ULTRA-LITE™ Power Amplifier is based on both ISP Technologies patented D-CAT (Dynamic Current Amplifier Technology) and the new Dynamic Adaptive Amplifier Technology which is covered under patents pending. The STEALTH ULTRA-LITE™ is designed for use as a mono power amplifier to drive your guitar speaker cabinet with a minimum load impedance of 4 ohms. The STEALTH ULTRA-LITE™ is powered from an external laptop style switch mode power adaptor. The design provides excellent sonic performance for the guitar rig with excellent clipping characteristics. Please read this manual carefully for a through explanation of the STEALTH ULTRA-LITE™ Power Amplifier and its functions.

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## IMPORTANT SAFETY INSTRUCTIONS

### **Please read the following very carefully before operating this unit**

- Read ALL instructions carefully before using this unit. Keep these instructions for future reference. Heed all warnings and follow all instructions.
- Do not use this unit near water, in the rain, or where there is moisture. If this warning is ignored a serious electrical shock or death may occur.
- Do not attempt to service this unit. No user serviceable parts inside. Refer servicing to qualified, ISP approved personnel. Servicing is required when the unit is damaged in any way, such as power adaptor is damaged, liquid has been spilled into the unit, the unit has been exposed to rain or moisture, does not operate normally, or has been dropped.
- Care should be taken to avoid spilling any foreign objects or liquid into this unit. Avoid exposure of this equipment to dripping or splashing and ensure that no objects filled with liquid, such as vases, are placed on the equipment.
- Only use accessories or attachments that are specified by the manufacturer.
- Failure to follow these instructions may void the warranty.



NO USER SERVICABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED ISP TECHNOLOGIES SERVICE PERSONNEL.

The lightning bolt triangle is used to alert the user to the risk of electric shock.

The exclamation point triangle is used to alert the user to important operating or maintenance instructions.

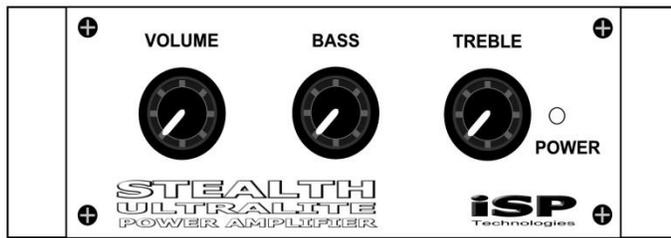


## POWER REQUIREMENTS

This unit requires the connection of the external AC Power Adaptor to a 120 volt AC outlet. Do not attempt to connect this unit to any power source other than the one supplied with the STEALTH ULTRA-LITE™ Power Amplifier. The STEALTH ULTRA-LITE™ Power Amplifier will typically draw on the order of 1 amps of current off the AC line when in use.

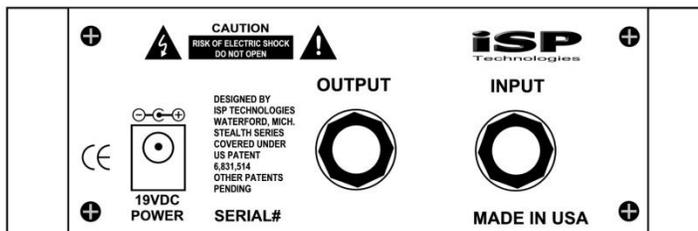
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## STEALTH ULTRA-LITE™ FRONT PANEL



- 1. VOLUME CONTROL**  
Controls the Volume of the STEALTH ULTRA-LITE™ .
- 2. BASS CONTROL**  
Controls the amount of Bass in the output of the STEALTH ULTRA-LITE™ .  
Provides +/-10db of adjustment.
- 3. TREBLE CONTROL**  
Controls the amount of Treble in the output of the STEALTH ULTRA-LITE™ .  
Provides +/-10db of adjustment.
- 4. POWER ON LED**  
Indicates the STEALTH ULTRA-LITE™ is powered ON.

## STEALTH ULTRA-LITE™ REAR PANEL



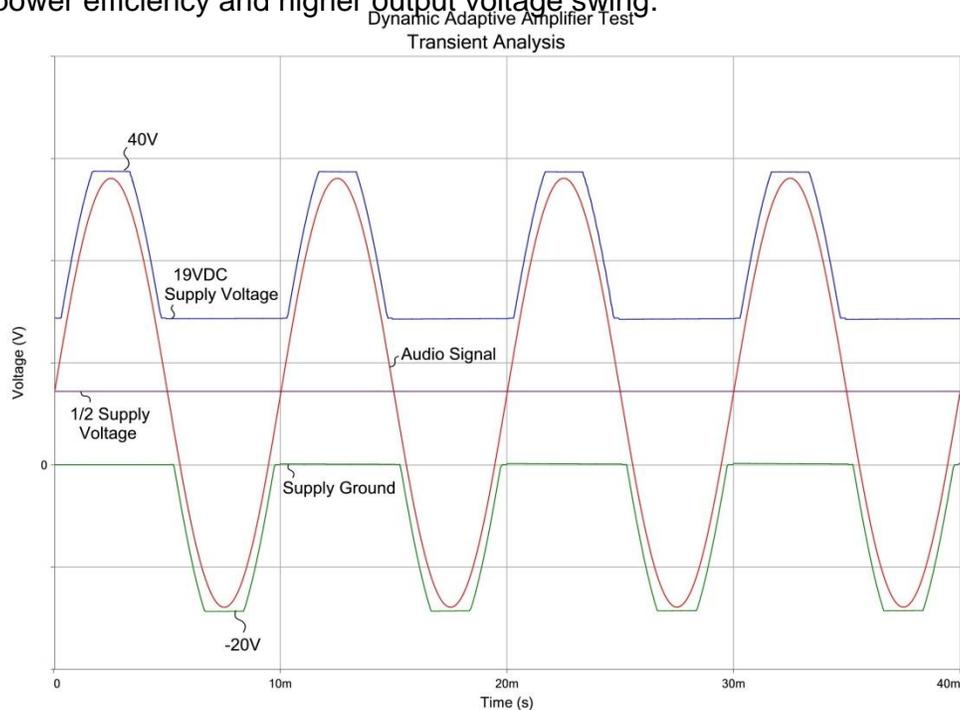
- 1. OUTPUT SPEAKER CONNECTION**  
Speaker connection, connect ¼ speaker cord to external speaker. Use 4Ω, 8Ω or 16Ω loads.
- 2. INPUT CONNECTION**  
Connect input signal from Guitar pedals or preamplifier
- 3. EXTERNAL 19VDC POWER ADAPTOR CONNECTION**  
Connect external 19VDC Power Adaptor to this connection. **CAUTION: USE ONLY THE POWER ADAPTOR SUPPLIED WITH THE UNIT, OTHER POWER SOURCE MAY CAUSE DAMAGE OR FAILURE OF THE UNIT.**

If the STEALTH ULTRA-LITE™ is used on a pedal board the supplied rubber feet can be mounted on the bottom of the unit.

# STEALTH ULTRA-LITE™ POWER AMPLIFIER TECHNOLOGY

The STEALTH ULTRA-LITE™ Power Amplifier is based on a new Power Amplifier Technology developed by ISP Technologies. The STEALTH ULTRA-LITE™ uses ISP Technologies patented “Dynamic Current Amplifier Technology” (D-CAT) controlled by a new patent pending “Adaptive Dynamic Amplifier Technology” which provides a novel Class H power amplifier topology with improved efficiency and Dynamic Voltage Multiplication. This allows the STEALTH ULTRA-LITE™ Power Amplifier to operate on a low voltage 19 volt DC power adaptor and provide extremely high output voltage swing well in excess of the 19 volts DC.

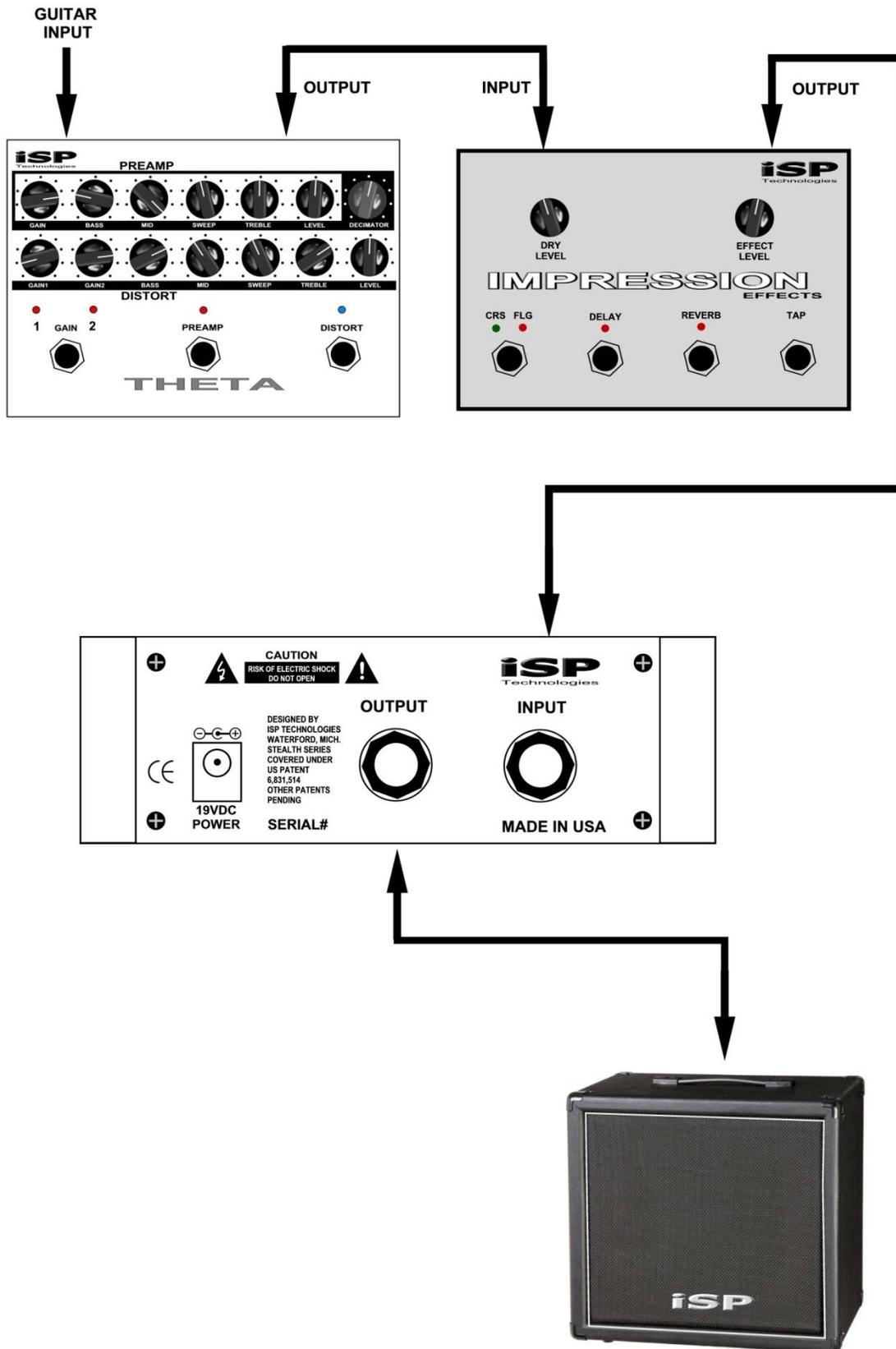
The graph below shows the output voltage waveform and adaptive power supply rails. At low power the STEALTH ULTRA-LITE™ operates as a normal class A-B power amplifier. When the output signal approaches the nominal 19 volt power supply rail, the Dynamic Adaptive Amplifier Technology provides two functions: a dynamic multiplication or lifting of the power supply rails and an adaptively tracking power supply where the power supply rails will continuously track the output signal within a fixed ratio. The net result is a class A-B power amplifier with excellent sonic performance and very musical clipping characteristics with greatly increased power efficiency and higher output voltage swing.



## STEALTH ULTRA-LITE™ POWER AMPLIFIER OPERATION

The STEALTH ULTRA-LITE™ power amplifier is designed to operate like any other power amplifier with a line level input signal. The STEALTH ULTRA-LITE™ amplifier ships with an external switch mode power adaptor, which connects to normal AC power. The supplied Power Adaptor will operate between 100 VAC and 240VAC input and will connect to the STEALTH ULTRA-LITE™ Power connector providing 19VDC @ 7.9 amps output power for the STEALTH ULTRA-LITE™. Do not attempt to power the STEALTH ULTRA-LITE™ with any other power source than the one supplied from ISP Technologies. On power up, the STEALTH ULTRA-LITE™ will mute all outputs for a Turn On time of approximately 4 seconds. If power is removed, the STEALTH ULTRA-LITE™ will instantly mute the output before any audible pop can occur. Connect the STEALTH ULTRA-LITE™ into your system as shown below for Mono operation. For high power rigs multiple STEALTH ULTRA-LITE™ Power Amplifiers can be used with multiple speakers. **NOTE:** The minimum load impedance allowed is 4 ohms. If lower load impedance is used the STEALTH ULTRA-LITE™ may shut down when the demand for current exceeds the maximum allowed. If shutdown occurs check your speaker load impedance.

# STEALTH ULTRA-LITE™ POWER AMPLIFIER CONNECTIONS



# STEALTH ULTRA-LITE™ SPECIFICATIONS

<b>INPUT IMPEDANCE</b>	470k ohms
<b>OUTPUT POWER</b>	4Ω @ 10% THD = 180WPEAK = 90WRMS 4Ω @ 1% THD = 160WPEAK = 80WRMS 8Ω @ 10% THD = 120WPEAK = 60WRMS 8Ω @ 1% THD = 92WPEAK = 46WRMS 16Ω @ 10% THD = 62WPEAK = 31WRMS
<b>INPUT SENSITIVITY / MAX OUTPUT</b>	-10dBu / .25vrms
<b>MAXIMUM INPUT SIGNAL</b>	+17dBu
<b>VOLTAGE GAIN - MAXIMUM</b>	47dB
<b>NOISE FLOOR</b>	-80dBu
<b>BASS / TREBLE RANGE</b>	+/- 10dB
<b>DYNAMIC RANGE</b>	104db A WTD
<b>DISTORTION</b>	@10dBu output=.02% Full Output=.1%
<b>FREQUENCY RESPONSE</b>	20Hz – 20KHz = +0 / -.5dB
<b>INPUT POWER</b>	40mA @idle 1.5A full power @4Ω
<b>DIMENSIONS</b>	4.95" W x 1.75" H x 4.2" D
<b>WEIGHT</b>	.9 LBS
<b>PROTECTION</b>	Auto shutdown / Output shorts or low load impedance. Protected for open loads.

Note: 0dbu = .775 vrms

The STEALTH ULTRA-LITE™ Power Amplifier is covered under US Patents 6,831,514 and 9,402,128 Other Patents Pending.  
STEALTH ULTRA-LITE and ULTRA-LITE are trademarks of ISP Technologies

# WARRANTY AND SERVICE

The Internal Circuitry is fully guaranteed to be free of defects under normal use and service for a period of three years from the date of purchase.

Any damage resulting from the misuse or the failure to follow the precautions and instructions will void the warranty.

In the event that the unit needs to be repaired, please return the unit to ISP Technologies directly. Simply repack the unit, send a copy of the original receipt, a note stating the problem, your contact information and send it to:

ISP Technologies, LLC  
5479 Perry Drive Unit B  
Waterford, MI 48329  
Attn: Repair Dept.

All shipping charges must be fully prepaid.

ISP will not be responsible for any damages incurred in shipping of any unit. Any claim will need to be settled with the shipping company.

The warranty will be voided if the serial number has been tampered with in any way. The warranty card must also be filled out and returned in order to activate the warranty.

Should you have any questions for the repair department prior to returning the product please call 248-673-7790



ISP TECHNOLOGIES, LLC  
5479 PERRY DRIVE UNIT B  
WATERFORD, MI. 48329  
Phone: 248-673-7790

[www.isptechnologies.com](http://www.isptechnologies.com)