



## V5 HIGH VOLTAGE DI-RE-PREAMPLIFIER

### SPECIFICATIONS

<b>Audio circuit topology</b>	100% discrete, high-voltage, Class A
<b>Gain range:</b>	Gain switched in 2dB steps, +/-0.2dB
<b>Line :</b> -2dB ~ +38dB	Transformer balanced, 9,000 ohms
<b>Instrument :</b> +2dB ~ +42dB	Unbalanced, 10,000,000 ohms
<b>Microphone Hi-Z :</b> +20dB ~ +60dB	Transformer balanced, 6,600 ohms
<b>Microphone Lo-Z :</b> +26dB ~ +66dB	Transformer balanced, 1,800 ohms
<b>PAD</b> (passive input attenuator)	Line -13dB, Instrument -10dB, Mic -15dB
<b>Phantom power</b>	+48v regulated, 10mA
<b>Input - Output connectors</b>	XLR, pin 2 hot, all jacks TRS (tip = hot)
<b>Maximum LINE output level</b>	+30dBu, DC coupled, balanced 600 ohms
<b>Maximum ISOLATED output level</b>	+12dBu, transformer isolated, unbalanced
<b>Headphone output</b>	0.5W, 600 ohm load
<b>Noise 22Hz-22kHz unweighted</b>	-98dBu typical, minimum gain (-128dB EIN)
<b>Distortion THD, IMD</b>	0.05% at +10dBu, 0.5% at +30dBu
<b>Frequency response, +/-0.5dB</b>	2Hz to 20kHz
<b>Frequency response, -3dB</b>	2Hz to 500kHz (internal band limited)
<b>VU meter</b>	Professional, wide range -30dB ~ +18dB
<b>Signal LED</b>	LED peak capture blue 0dB, red +20dB
<b>High cut filter</b>	-3dB at 3.7kHz, minimum phase design
<b>Tone selector</b>	10 passive filter-tone selections
<b>Polarity reverse</b>	All outputs (relay switched)
<b>AC power</b>	Internal toroidal AC supply 115v~230v
<b>Fuse</b>	REAR selectable, 50/60Hz, 0.5A, 35w max.
<b>Dimensions</b>	8.5 x 3.5 x 12 in (216 x 88 x 305mm)
<b>Weight</b>	10lbs (4.5kg)

*Avalon reserves the right to incorporate changes in design and in the specifications of this product without prior notice.*



### AVALON DESIGN

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# AVALON

Pure Class A



V-Five

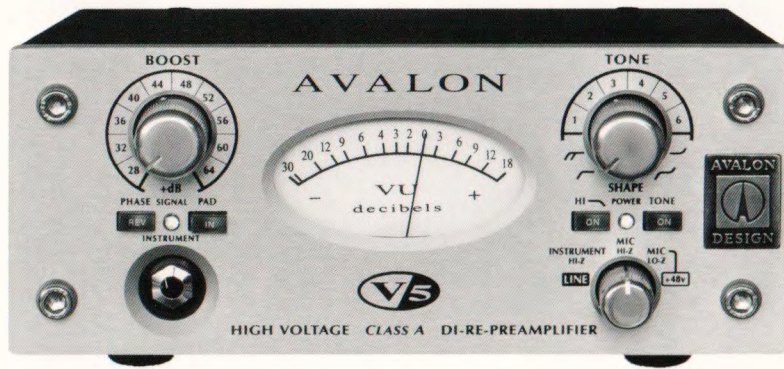
## DI-RE-PREAMPLIFIER

AVALON



DESIGN





## V5 HIGH VOLTAGE DI-RE-PREAMPLIFIER

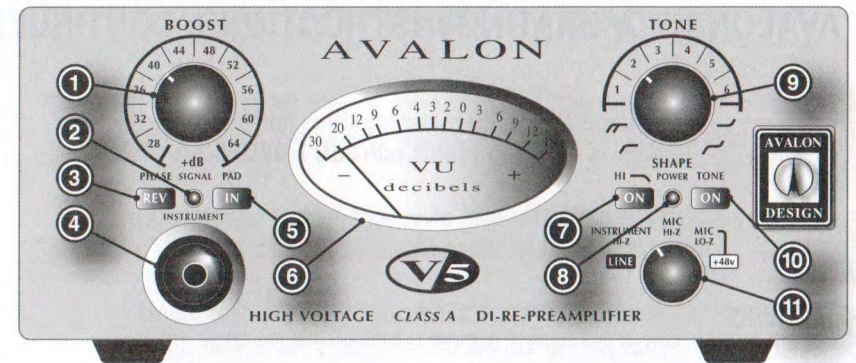
The Avalon **V5 DI-RE-MIC PREAMPLIFIER** is an ultra high performance, professional preamplifier, instrument DI interface and all input RE-AMP. Created for maximum versatility, the V5's sonic signature of "Deep and Controlled Bass, Musical Mid-range and enhanced Vocal Projection" combine with a unique "ten point" passive TONE BANK™, high-cut buzz filter, large wide-range analog VU meter and long-life quality construction...*The V5 will capture every magical performance and continues Avalon's passion and commitment to **Sonic Excellence** !*

### FEATURES

- 100% discrete, Pure Class A, high-voltage signal amplifiers in all audio paths for maximum dynamic range and +30dB operating headroom.
- Hi-Z, 10,000,000 ohm Instrument DI input for invisible "Zero-Loading".
- Wide range, premium, low-ratio microphone input transformer.
- Dual impedance selector for ribbon, dynamic and powered microphones.
- Passive TONE BANK™ for custom filtering and unique tone shaping.
- Hi-Cut passive FILTER for eliminating unwanted high frequency buzz.
- High performance, fully isolated transformer for RE-AMPING functions.
- Wide range, professional VU meter with custom scale -30dB to +18dB.
- Dual color, LED meters for 0dB and +20dB fast PEAK signal capture.
- High power personal headphone monitor output.
- High-current, DC coupled output drivers for deep and controlled bass.
- Sealed, silver contact relay switching for all audio routing and bypass.
- Precision, gold plated, switched gain control for accurate 2dB steps.
- Low noise, AC toroid and discrete high-voltage linear DC power supply.

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## AVALON V5 OPERATING INSTRUCTIONS

Check AC power selector on rear panel for correct local supply **115v or 230v**.  
**TO CHANGE AC VOLTAGE:** Carefully flip the voltage/fuse panel open, remove the RED volatge/fuse card and rotate to indicate correct AC voltage through rear voltage display window. Close plastic cover flap and press closed to lock.

- ① **BOOST control:** Boosts gain in 2dB steps for ALL inputs.

LINE	-2dB to +38dB
INSTRUMENT - DI	+2dB to +42dB
MICROPHONE Hi-Z	+20dB to +60dB
MICROPHONE Lo-Z	+26dB to +66dB

*Input Gain Range*

- ② **SIGNAL LED:** The blue **SIGNAL** LED illuminates when the PEAK output reaches 0dB and red when the PEAK signal is +20dB.
- ③ **PHASE REV switch:** The **REV** switch reverses the output polarity for ALL outputs including the transformer ISOLATED (instrument) RE-AMP.
- ④ **INSTRUMENT & DI input:** The front mounted TRS jack accepts all active or passive unbalanced inputs. Input impedance is 10,000,000 ohms. Maximum input of +28dB or +38dB with the PAD.
- ⑤ **PAD switch:** The **PAD** switch adds a resistive attenuator to ALL inputs.

LINE	-13dB PAD	+45dB
INSTRUMENT - DI	-10dB PAD	+38dB
MICROPHONE Hi-Z	-13dB PAD	+23dB
MICROPHONE Lo-Z	-15dB PAD	+19dB

*Input PAD and maximum input level with PAD engaged*

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## AVALON V5 OPERATING INSTRUCTIONS, CONTINUED.

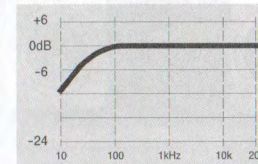
- ⑥ **VU meter:** The large analog VU meter indicates nominal output signal. Range is **-30dB to +18dB** with **0dB = 0VU=0.775v RMS**.
- ⑦ **HI CUT filter:** The **HIGH CUT** switch gives a gentle roll off in the upper octaves and eliminates unwanted noise and buzz.
- ⑧ **POWER LED:** The blue **POWER** LED indicates the V5 is operational. When the **INPUT MODE** selector is set to **+48v**, the LED color changes to red, indicating 48v phantom power is active on the rear mounted XLR microphone input connector.
- ⑨ **TONE control:** The **TONE** control offers a selection of ten **PASSIVE** filters. The graphs to the right provide an example of the shapes of these musical tone selections. The first two positions are for bass cut and rumble filtering. Position 1 ~ 6 are the classic **TONE-BANK™** from the *“Ultra-Five” Avalon U5 direct box*. The last two positions are an **AIR-LIFT** and **LOW CUT-AIR-LIFT**. You may hear a small drop in loudness when the **TONE** filter is engaged, adjust the **BOOST** control for required level change.
- ⑩ **TONE switch:** The **TONE** switch engages the **PASSIVE** filter-tone control. ALL switches on the Avalon V5 operate sealed silver relays for perfect signal transfer and long life reliability.
- ⑪ **INPUT MODE selector:** The **INPUT MODE** switch selects one of three inputs. **LINE, INSTRUMENT-DI, MIC Hi-Z, MIC Lo-Z** and **MIC Lo-Z with +48v**. The phantom +48v position is the same impedance as the Lo-Z. ALL input signal routing is via sealed silver relays for the most transparent and direct audio path.

# \* WARNING \*

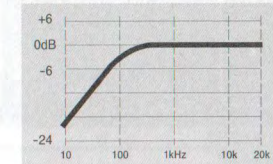
WHEN SWITCHING FROM LO-Z MIC INPUT TO LO-Z +48V (PHANTOM POWER) INPUT, **ALWAYS** MAKE SURE THE **BOOST CONTROL (1)** IS SET TO THE MINIMUM GAIN POSITION AND **REDUCE MONITOR LEVEL** TO AVOID LOUD OR EXCESSIVE CLICKS OR POPS.

## AVALON V5 TONE-FILTER GRAPHS.

The V5 **TONE-FILTERS** offer a wide range of “passive” tones & voices for improved clarity, problem solving filters and music enhancement.

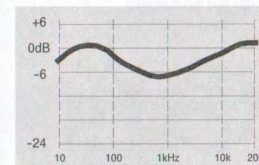


☑ vocals and instruments, high pass, rumble filter  
50Hz @ 6dB/octave

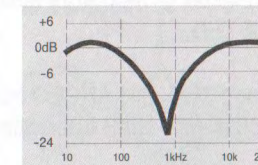


☑ vocals and instruments, high pass, rumble filter  
90Hz @ 6dB/octave

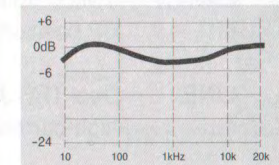
TONE selections 1 through 6 are identical to the **TONE-BANK™** options in the Avalon U5 “Ultra-Five” Direct Box-preamplifier.



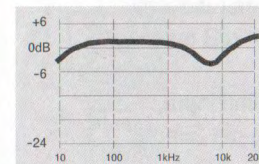
1 acoustic and string instruments, electric bass and keyboards



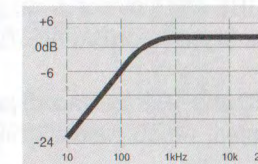
2 electric bass guitar and mid scoop



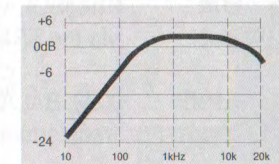
3 acoustics, strings, electric and bass guitar and keyboards



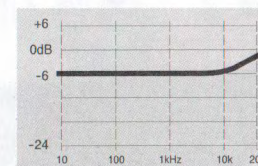
4 acoustics, strings electric and bass guitar and keyboards



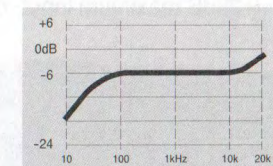
5 acoustic and electric instruments



6 electric and bass guitar

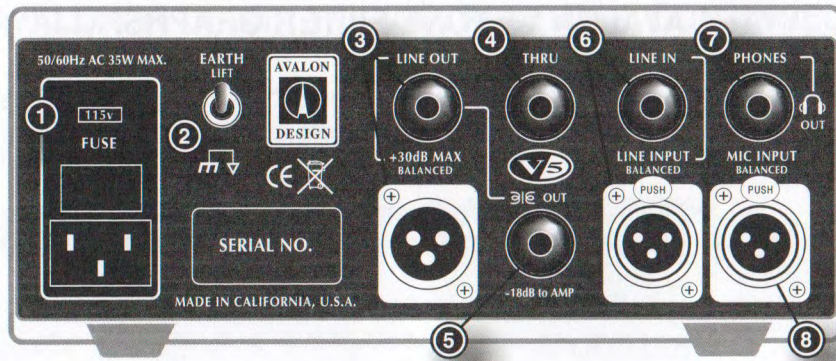


☑ AIR-LIFT vocals, acoustic-electric instruments



☑ AIR-LIFT & LOW-CUT vocals, acoustic-electric instruments





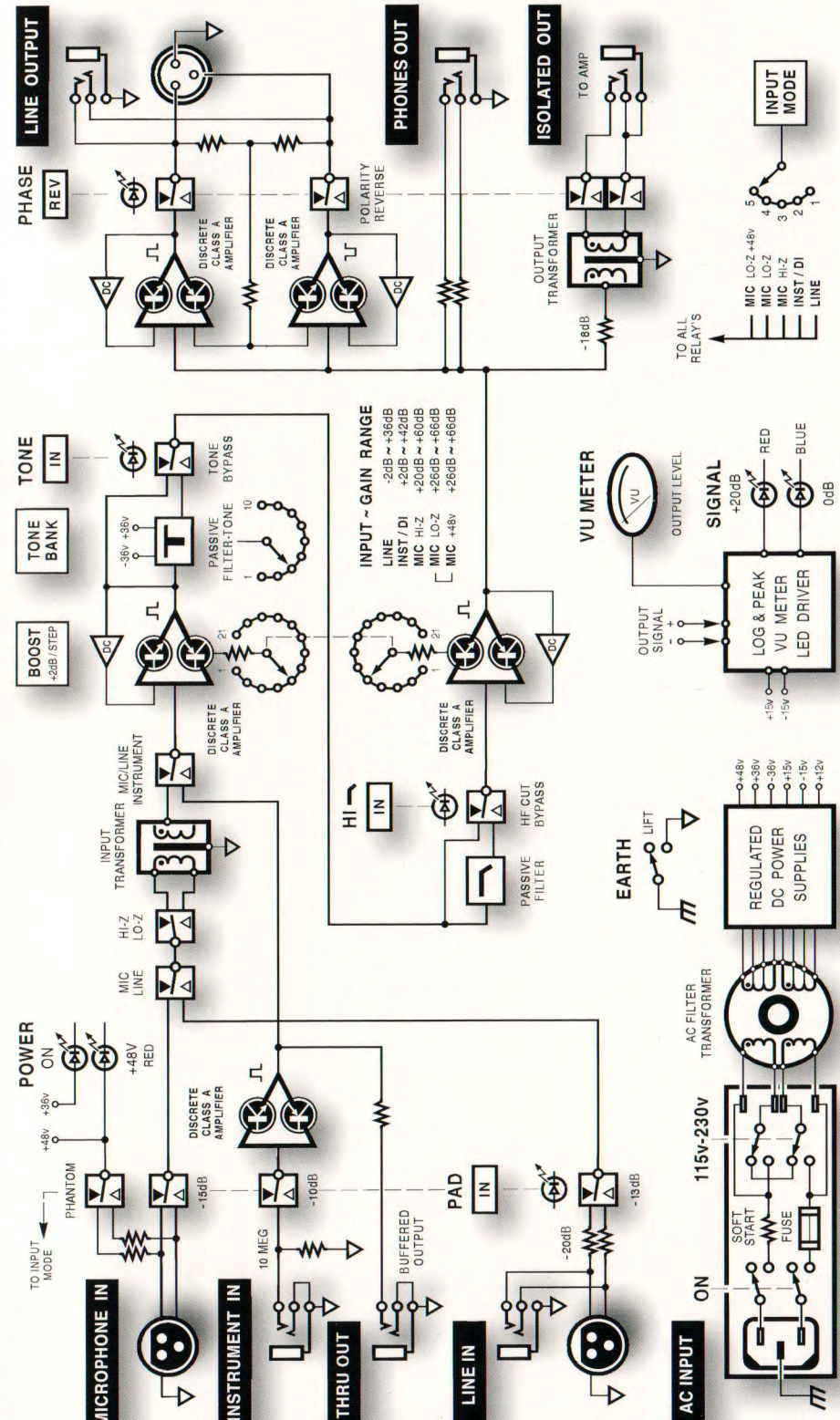
## AVALON V5 REAR PANEL CONNECTIONS

- ① **AC input** **AC VOLTAGE SELECTOR.** Select for either 115v or 230v. FUSE 5mm slow blow type : 115v = 0.2A, 230v=0.1A.
- ② **EARTH lift** Switch isolates chassis ground from audio signal ground, UP position is LIFTED.
- ③ **LINE out** Dual TRS Jack and XLR BALANCED outputs, DC coupled, high-current, 600 ohm, +30dB maximum.
- ④ **THRU out** THRU output is BUFFERED from Instrument DI input located on front panel. Ideal for amplifier inputs or tuners.
- ⑤ **∓IE out** The ISOLATED (RE-AMP) output is transformer isolated via the TRS jack. Signal is UNBALANCED +12dB maximum.
- ⑥ **LINE input** XLR BALANCED and TRS (balanced) jack line input, transformer isolated, +45dB maximum input, pin 2=hot.
- ⑦ **PHONES out** Headphone TRS jack 0.5W maximum 600 ohms.
- ⑧ **MIC input** XLR BALANCED microphone input, transformer isolated, +23dB maximum input, pin 2=hot.



Rack Mount Kit RM-2 showing BLACK option U5 and V5.

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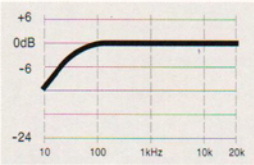


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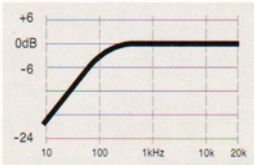


# AVALON V5 TONE-BANK™

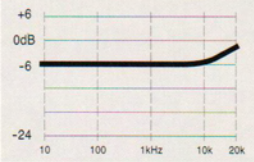
The V5 TONE-FILTERS offer a wide range of "passive" tones & voices for improved clarity, problem solving filters and music enhancement.



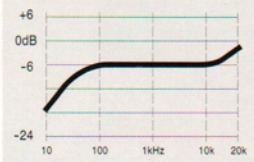
**1** vocals and instruments, high pass, rumble filter 50Hz @ 6dB/octave



**2** vocals and instruments, high pass, rumble filter 90Hz @ 6dB/octave

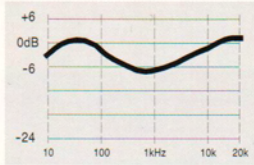


**3** AIR-LIFT vocals, acoustic-electric instruments

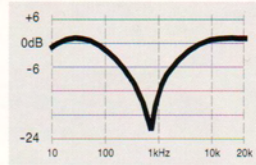


**4** AIR-LIFT & LOW-CUT vocals, acoustic-electric instruments

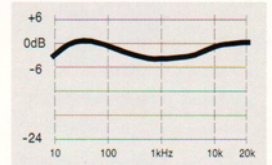
TONE selections 1 through 6 are identical to the TONE-BANK™ options in the Avalon U5 "Ultra-Five" Direct Box-preamplifier.



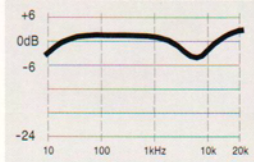
**1** acoustic and string instruments, electric bass and keyboards



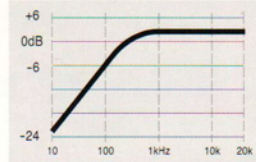
**2** electric bass guitar and mid scoop



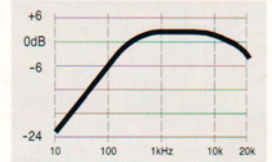
**3** acoustics, strings, electric and bass guitar and keyboards



**4** acoustics, strings electric and bass guitar and keyboards



**5** acoustic and electric instruments



**6** electric and bass guitar



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## V5 DI-RE-PREAMPLIFIER

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# AVALON V5 QUICK SET-UP OPERATING GUIDE

## PHASE (switch)

Reverses the polarity of ALL (3) input sources

## SIGNAL

Peak capture  
Bi-color LED  
Blue = 0dB  
Red = +20dB

## PAD (switch)

Resistive attenuator for ALL (3) inputs  
Line : -13dB  
Instrument : -10dB  
Microphone : -15dB

## INSTRUMENT

1/4" unbalanced  
RTS phone jack  
10 meg.ohm high-Z  
ideal for keyboards,  
synthesizers, drum machines,  
passive & active acoustic,  
bass and electric guitars

*Note: For best sonic performance,  
allow thirty minutes for warm-up.*

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## BOOST (+dB)

Trims input gain  
Line : -2dB to +38dB  
Instrument : +2dB to +42dB  
Mic HiZ : +20dB to +60dB  
Mic LoZ : +26dB to +66dB  
(scale calibrated for Mic LoZ)

## TONE (shape)

Ten position  
Passive Tone Bank™  
1-6 for music contour  
— High pass filters  
— HF lift ~ LF cut  
(see graphs)

## HI (switch)

Passive HIGH  
cut filter  
-3dB @ 3.7kHz  
eliminates noise  
and fret buzz

## POWER

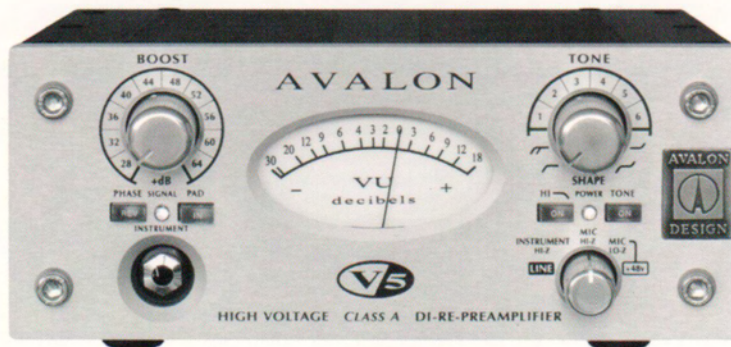
Bi-color LED  
Blue = AC ON  
Red = +48v ON

## TONE (switch)

Activates the  
Passive Tone Bank™

## INPUT MODE

Selects INPUT source  
Line : XLR~1/4" TRS jack  
Instrument : 1/4" TRS jack (front)  
Microphone HiZ & LoZ : XLR  
Mic LoZ  +48v phantom power ON



## METER

Professional VU meter  
-30dB to +18dB wide scale  
0VU = 0dB = 0.775v RMS



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## V5 DI-RE-PREAMPLIFIER

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WHEN SWITCHING FROM LO-Z MIC INPUT TO  
LO-Z +48V (PHANTOM POWER) INPUT,  
**ALWAYS** MAKE SURE THE BOOST CONTROL  
IS SET TO THE MINIMUM GAIN POSITION  
AND **REDUCE MONITOR LEVEL** TO AVOID  
LOUD OR EXCESSIVE CLICKS OR POPS.