V5 HIGH VOLTAGE DI-RE-PREAMPLIFIER

SPECIFICATIONS

Audio circuit topology
Gain range:
Line : -2dB ~ +38dB
Instrument : +2dB ~ +42dB
Microphone Hi-Z : +20dB ~ +60dB
Microphone Lo-Z : +26dB ~ +66dB
PAD (passive input attenuator)
Phantom power
Input - Output connectors
Maximum LINE output level
Maximum ISOLATED output level
Headphone output
Noise 22Hz-22kHz unweighted
Distortion THD, IMD
Frequency response, +/-0.5dB
Frequency response, -3dB
VU meter
Signal LED
High cut filter
Tone selector
Polarity reverse
AC power
Fuse
Dimensions
Weight

100% discrete, high-voltage, Class A
Gain switched in 2dB steps, +/-0.2dB
Transformer balanced, 9,000 ohms
Unbalanced, 10,000,000 ohms
Transformer balanced, 6,600 ohms
Transformer balanced, 1,800 ohms
Line -13dB, Instrument -10dB, Mic -15dB
+48V regulated, 10mA
XLR, pin 2 hot, all jacks TRS (tip = hot)
+30dBu, DC coupled, balanced 600 ohms
+12dBu, transformer isolated, unbalanced
0.5W, 600 ohm load
-98dBu typical, minimum gain (-128dB EIN)
0.05% at +10dBu, 0.5% at +30dBu
2Hz to 20kHz
2Hz to 50kHz (internal band limited)
Professional, wide range -30dB ~ +18dB
LED peak capture blue 0dB, red +20dB
-3dB at 3.7kHz, minimum phase design
10 passive filter-tone selections
All outputs (relay switched)
Internal toroidal AC supply 115v~230v
REAR selectable, 50/60Hz, 0.5A, 35w max.
8.5 x 3.5 x 12 in (216 x 88 x 305mm)
10lbs (4.5kg)

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

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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.

MADE IN U.S.A.

AVALON DESIGN - PURE CLASS A
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
   - 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. DIE 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.

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 +80dB
   - MICROPHONE Lo-Z: +26dB to +86dB

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
   - 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.
   - The PAD switch adds a resistive attenuator to ALL inputs.

5. PAD switch:
   - 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.
AVALON V5 OPERATING INSTRUCTIONS, CONTINUED.

**VU meter:**
The large analog VU meter indicates nominal output signal.
Range is -30dB to +18dB with 0dB = 0.775v RMS.

**HI CUT filter:**
The HIGH CUT switch gives a gentle roll off in the upper octaves and eliminates unwanted noise and buzz.

**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.

**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.

**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.

**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.

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**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.

**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**