
# DIRECT SIGNAL PATH

The Avalon VT-737 features a combination of TUBE preamplifiers, optocompressor, sweep equalizer, output level and VU metering in a 2U space. The VT-737 preamplifier has three input selections: 1. Transformer balanced microphone input, +48v phantom selection. 2. Instrument DI high source input with jack located on front panel. 3. Balanced line input, discrete high-level Class A. The high-performance preamplifier utilizes two cascaded, dual vacuum tube triodes configured with minimum negative feedback. A high gain switch boosts the overall gain of the preamplifier. The four high quality tubes are configured as singled ended anode coupled followers. A passive-variable high pass filter and hard-wire relay bypass completes the input signal conditioning. The phase reverse relay is available on all three inputs.

## Opto-Compressor

The opto-compressor features a minimum signal path design with twin class A vacuum tube triodes for gain matching. The optical attenuator acts as a simple passive level controller. Full dynamic control from soft compression to hard-knee limiting can be achieved with threshold, ratio-compression, attack and release controls plus gain reduction selection on the large VU meter.

Special spectral control including de-ess is available with the dual sweep mid EQ to sidechain switch. The EQ section can be flipped pre or post the opto-compressor via a front panel switch for alternate effects and tone shaping. Two VT-737's can be linked via a rear panel link cable for stereo tracking. The compressor bypass is a sealed silver relay for the most direct signal path.

## Equalizer

The VT-737 equalizer utilizes 100% discrete, Class A-high-voltage transistors for optimum sonic performance. The high and low frequency bands provide the smooth characteristics of an all passive design, while the dual mid bands include variable frequency and switched Q-width selection. The enhanced range of the mid bands is extended into the high and low bands by the use of X10 frequency multipliers. The bypass switch incorporates a sealed silver relay for the most direct signal path. When the EQ to sidechain is engaged, the high-low EQ remains in the audio path for tone enhancement. The output level control provides a variable control of the overall signal path. The output amplifier utilizes another dual triode vacuum tube driving a 100% discrete, Class A, high-current, balanced and DC coupled low noise output amplifier.

## AVALON VT-737 FEATURES

- Minimal signal path design
- Four Class A vacuum tube triodes
- Transformer balanced microphone input
- EQ to sidechain for de-ess
- High-voltage circuits + 200v
- Headroom to +30dB
- Low noise -92dB
- Internal discrete power supply
- Soft-start tube life extender
- Stereo link
- All discrete Class A equalizer
- Sealed silver relays
- Professional VU meter

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# AVALON DESIGN VT-737 VACUUM TUBE DIRECT SIGNAL PATH


## VT-737 SPECIFICATIONS

| | |
|---|---|
| Circuit topology | Four dual triode vacuum tubes, high-voltage discrete Class A |
| Gain range | Microphone: Transformer balanced 850 ohm, 0dB to +58dB<br>Instrument: Unbalanced 1 meg ohm, 0dB to +30dB<br>Line: Balanced Class A 20k ohms, -27dB to +18dB |
| Maximum Input level and connector types | Microphone +10dB @ 25Hz, +20dB @ 1kHz balanced XLR<br>Instrument +30dB unbalanced front panel jack socket<br>Line +36dB balanced XLR |
| Maximum output level | +30dB balanced 600 ohms, DC coupled, pure Class A |
| Output type and gain | XLR connector, output trim gain -45dB to +10dB |
| Noise 20kHz unweighted | -92dB |
| Noise microphone EIN | -116dB, 22Hz to 22kHz unweighted |
| Distortion THD, IMD | 0.5% |
| Frequency response -/+0.5dB | 10Hz to 120kHz input filter included |
| Frequency response -3dB | 1 Hz to 200kHz line in-out |
| VU meter and gain reduction | 0VU = +4dB and gain reduction to -20dB |
| High cut filter | Variable 6dB per octave 40Hz to 200Hz |
| Compressor type | Optical passive attenuator incorporating twin vacuum tubes and stereo link |
| Threshold - Ratio | Threshold variable -30dB to +20dB, ratio-compression variable 1:1 to 20:1 |
| Attack - Release | Attack variable 2mS to 200mS, release variable 100mS to 5 seconds |
| Equalizer type | Discrete Class A, variable active and switched passive design |
| Frequency bands (4) | Treble - switched 10kHz,15kHz, 20kHz, 32kHz, +/- 20dB range, shelf<br>High mid - variable 200Hz to 2k8Hz and 2kHz to 28kHz, +/- 16dB range, hi-lo Q<br>Low mid - variable 30Hz to 450Hz and 300Hz to 4k5Hz, +/- 16dB range, hi-lo Q<br>Bass - switched 15Hz, 30Hz, 60Hz, 150Hz, +/- 24dB range, shelf |
| AC power | Internal toroidal 100v to 240v, 50-60Hz selectable, 75 watts maximum |
| Dimensions | 19 x 12 x 3.5 in (482 x 305 x 89mm) |
| Weight | 22lbs (10kg) |
| Dimensions-shipping carton | 21 x 18 x 8 in (533 x 457 x 203mm) |
| Weight-packed | 26lbs (11.8kg) |

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