



- EQ-2 Dual Parametric Valve EQ
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#### **EQ-2 Dual Parametric Valve Equaliser**

The EQ-2 was launched in response to users who wanted the same unmistakably warm and musical sound of our ground breaking EQ-1 equaliser, but required even more flexibility in the way the signal is processed.

The EQ-2 boasts two channels of fully parametric 4 band valve equalisation - which in conjunction with variable high and low cut filters offers unlimited control of any audio source. But that's not all - unlike many valve equalisers, the EQ-2 provides continuously variable frequency controls, so choice of frequency is not limited to switched selections. The EQ-2 also features a pair of the acclaimed TL Audio mic pre amps (with phantom power), to enable high quality direct-to-tape microphone recording, and a pair of front panel auxiliary inputs enable a guitar or keyboard to directly access the EQ-2.

Another brilliant refinement is the 'stereo mode' switch - when activated, the EQ controls of channel A automatically process the signal on channel B in an identical fashion - thus the audio signals through both channels have the same EQ applied to them: ideal for precise equalisation of stereo sources and overall mixes.

Quite simply, we believe that the EQ-2 is one of the best sounding and most versatile equalisers currently available!

The EQ-2 employs a total of six valve stages per channel: one in each of the four EQ bands, followed by a pair in the output stage. ECC83/ 12AX7A valves are used, run from a stabilised 250v DC supply.

- 2 channels each with 4 bands of fully parametric valve equalisation
- LF band variable from 30Hz to 3kHz

- LM band variable from 30Hz to 3kHz
- HM band variable from 1kHz to 20kHz
- HF band variable from 1kHz to 20kHz
- Each band offers  $\pm 15$ dB of gain and variable Q between 0.5 and 5
- EQ bypass switch on each channel
- Continuously variable high and low cut filters (12dB/oct) with bypass switches
- Low cut filter variable from 30Hz to 1kHz
- High cut filter variable from 1kHz to 25kHz
- Output level control giving +/- 15dB of trim
- Peak LED indicates degree to which valves are being driven
- Balanced microphone and line level inputs with variable gain control
- Balanced line outputs, switchable for -10dB or +4dB operation
- Line inputs and outputs duplicated on unbalanced jack connections
- Front panel dual sensitivity auxiliary inputs (for guitars / keyboards etc)
- 48v phantom power
- Insert point on each channel (between mic pre amp and EQ section)
- Status LEDs on all function switches
- Frequency response 20Hz to 40kHz +0 / -1dB

Mic Input: Impedance: >2k. Gain range: +10 to +60dB. Input Noise (EIN): -127dBu (22Hz-22kHz). Max input level: +10dBu. Balanced XLR connector. Line Input: (Balanced) Impedance: > 5k. Gain range: -20dB to +30dB. Max input level: +24 dBu. Balanced XLR connector. (Unbalanced) Impedance: > 5k. Gain range: -10dB to +35dB . Max input level: +24dBu. Jack connector. Auxiliary Input: Impedance : 220k. Max gain : 40dB. Max input level: +22dBu. Unbalanced jack connector. Output: Balanced output impedance: 47. Max level: +26dBu. Unbalanced output impedance: 47. Max level: +20dBu into 10k. Insert point: stereo jack, tip=send, ring=return. Nominal level -2dBu. Output impedance: 47, Return input impedance: 10k. Frequency response: 20Hz - 40kHz +0 / -1dB. Dynamic Range: >100dB. Power supply: 110-120v or 220-240v AC. Power consumption: 35VA typical. Dimensions: 483 x 250 x 132mm (19" 3U). Weight: 9kg Shipping Weight: 10kg.



**PA-1 Dual Pentode Valve Pre Amp** 

The PA-1 Pentode Pre Amp is TL Audio's top of the range pre amp producing a stunning sound from any source - and offers a significant improvement over the vast majority of console pre amps in any price range. All microphones - from an inexpensive dynamic to a top quality condenser produce a fuller, more open and more vibrant sound when fed through the PA-1, and instruments fed through the dedicated front panel DI input take on an added weight and presence. Separate input and output level controls give the ability to generate more or less harmonic contribution from the valve stages while being able to simultaneously regulate the overall output level.Switchable high and low pass filters, LED level indicators and a phase reverse facility are refinements that make the PA-1 a natural choice for any track laying or directto-tape recording situation.

The PA-1 differs from our standard hybrid pre amp design - it features a transformer coupled mic input followed by a low noise, high gain EF86 pentode valve. Two further triode valve stages (supplied by 250v DC) are incorporated in each channel. The instrument input bypasses the transformer, and feeds straight into the pentode valve. TL Audio's usual high drive solid state output stage completes the signal chain.

- 2 channels of high quality valve pre-amplification
- Balanced transformer coupled microphone inputs
- Front panel unbalanced jack instrument inputs
- Balanced line outputs, switchable for -10dB or +4dB operation
- Line outputs duplicated on unbalanced jack connections
- 48v phantom power
- Switchable input gain control (20 to 50dB in 10dB steps) with continuously variable +/- 12dB trim
- Switchable high and low pass filters (12dB / octave). Applies to all inputs
- HPF has cut off frequencies of 50Hz, 100Hz or 150Hz
- LPF has cut off frequencies of 5kHz, 10kHz or 15kHz

- Rotary faders for controlling output level
- Phase reverse switch on Channel B
- LED level indicators for signal present, peak and clipping
- Frequency response 30Hz to 40kHz +0 /-2dB

Mic Input: Impedance: > 1.5k. Switchable input gain 20-50dB in 10dB steps, with + / - 12dB variable trim control. Input noise (EIN): -122dBu (22Hz to 22kHz). Distortion at 20dB of gain and 0dBu output: 0.05%. Max input level: +6dBu. Balanced XLR connector. Instrument Input: Impedance 50k. Nominal sensitivity for 0dBu output: -35dBu. Unbalanced jack connector. Output: Balanced output impedance: < 10. Max level: +22dBu into 600. XLR connector. Unbalanced output impedance: 47. Max level: +20dBu into 10k. Jack connector. Frequency response: 30Hz to 40kHz +0 / -2dB. Power supply: 110-120v or 220-240v AC. Power consumption: 35VA typical. Dimensions: 483 x 205 x 88mm (19" 2U) Weight: 6 kg. Shipping Weight: 7 kg.



**EQ-1 Dual Valve Equaliser** 

The EQ-1 is the product that re-defined affordable valve technology, and four years later it boasts thousands of users worldwide. The EQ-1's strength is its very simplicity - each EQ band offers a choice of four carefully selected switched frequencies, which combined with gentle slopes and broad curves gives the EQ-1 an instantly warm, musical sound. Simply select a frequency then cut or boost it - the results are immediate and stunning! Microphones, keyboards, guitars and basses (for which the 8 band mono mode is extremely useful) are all enhanced by the EQ-1, and overall mixes can be sweetened and shaped quickly and effortlessly. Ideal for adding warmth in a digital environment, or for bypassing a bland solid state console EQ.

The EQ-1 features a high performance transformerless front end, followed by four valve stages per channel - the first stage is a voltage amplifier, and the following stages are shared by the EQ section (all valve stages running at 325v DC). This combination of technologies results in a very high specification for the pre amp, whilst still providing the classic valve sound with it's gradual overdrive characteristic. The output stages of the EQ-1 are balanced transformerless designs, providing buffering of the valve outputs and high drive capability. The absence of transformers in the signal path contributes to the wide frequency response and low distortion figure, which remain virtually constant from 20Hz to 40kHz.

- 2 channels each with 4 bands of valve equalisation
- LF band gives ±12dB shelving @ 60Hz, 120Hz, 250Hz or 500Hz (12dB/oct)
- LM band gives ±12dB peaking @ 250Hz, 500Hz, 1kHz or 2.2kHz (Q=0.5)
- HM band gives ±12dB peaking @1.5kHz, 2.2kHz, 3.6kHz or 5kHz (Q=0.5)
- HF band gives ±12dB shelving @ 2.2kHz, 5kHz, 8kHz or 12kHz (12dB/oct)
- Balanced microphone and line level inputs with variable gain control

- Balanced line outputs, switchable for -10dB or +4dB operation
- Line inputs and outputs duplicated on unbalanced jack connections
- Front panel mono unbalanced auxiliary input (for guitars etc)
- 48v phantom power
- Cascade switch for 8 band mono operation (Channel A output is fed into Channel B). Channel B input gain control then becomes overall output level control
- Insert point on each channel (between mic pre amp and EQ section)
- EQ bypass switch with status LED
- Frequency response 20Hz to 40kHz +0 /-1dB

Mic Input: Impedance: > 10k. Gain range: +16 to +60dB. Input Noise (EIN): -127dBu (22Hz-22kHz). Max input level: +10dBu. Balanced XLR connector. Line Input: (Balanced) Impedance: > 5k. Gain range: -10dB to +35dB. Max input level: +30dBu. Balanced XLR connector. (Unbalanced) Impedance: > 5k. Gain range: -10dB to +35dB. Max input level: +30dBu. Jack connector. Auxiliary Input: Impedance : 100k. Max gain : 50dB. Max input level: 0dBu. Unbalanced jack connector. Output: Balanced output impedance: < 10. Max level: +22dBu into 600. Unbalanced output impedance: 47. Max level: +20dBu into 10k. Insert point: stereo jack, tip=send, ring=return. Nominal level -2dBu. Output impedance: 47, Return input impedance: 10k. Frequency response: 20Hz - 40kHz +0 /-1dB. Distortion: 0.02% at 1kHz. Dynamic Range: 105dB. Power supply: 110-120v or 220-240v AC. Power consumption: 20VA typical. Dimensions: 483 x 205 x 88mm (19" 2U). Weight: 5kg Shipping Weight: 6kg.



PA-2 Dual Valve Mic Pre Amp / DI

The best selling PA-2 is the world's first truly serious affordable valve pre amp and inherits it's outstanding performance from TL Audio's industry standard C-1 Compressor and EQ-1 Equaliser, with which it shares the same pre amp design. As you would expect, the PA-2 delivers a warm, clean and exceptionally quiet sound. A phase reverse switch on channel B allows correction of phase problems when stereo miking, and a variable brightness peak LED indicates the threshold of valve compression. Not content with just providing a high quality microphone pre amp, we have also included a dual sensitivity instrument input so that keyboards, guitars, bass guitars and any line level source can all benefit from the deep, expansive sound that has become our trademark. The PA-2 is a free standing unit with rack ears and feet supplied as standard - making it equally at home in a rack, or positioned on the floor in the playing area.

The new PA-2 now incorporates an output pad switch, a loop-through output and a rear panel earth lift switch - three new refinements that enhance it's role as an instrument DI unit, and re-affirms the PA-2 as the most flexible dedicated valve pre amp currently available.

The PA-2 features the acclaimed TL Audio low noise solid state microphone pre amp followed by two valve stages per channel. The instrument input bypasses the initial pre amp stage and feeds directly into the first valve stage. In common with other TL Audio units, ECC83 / 12AX7A valves are utilised, run from a stabilised 250v DC power supply. This combination of solid state and valve circuitry yields exceptional performance: -127dBu EIN noise and a frequency response of 20Hz to 40kHz (-3dB points at 5Hz and 70kHz).

- 2 channels of affordable valve pre-amplificationBalanced XLR microphone inputs
- Unbalanced instrument inputs with switchable sensitivity (for guitar, keyboard etc.)
- Balanced XLR outputs

- 48 volt phantom power
- Continuously variable input gain controls
- Phase reverse switch on channel B
- Peak LEDs with variable brightness indicate degree to which valves are being driven
- Output level switch selects line level or microphone level (-30dB) output
- Loop-through output parallels the instrument input, allowing simultaneous miking and DI'ing of amplified instruments
- Rear panel earth lift switch helps prevent earth loops
- Exceptionally wide frequency response (20Hz to 40kHz +0 /-1dB)
- Stunningly quiet (-127dBu EIN)
- 19" rack mount kit included

Mic Input: Impedance: >10k. Gain range: +10 to +60dB. Input noise (EIN): -127dBu at max gain (22Hz-22kHz ). Distortion at 20dB of gain and 0dBu output: 0.05%. Max input level: +10dBu. Balanced XLR connector. Instrument Input: Impedance: 100k for guitar, 10k for keyboard. Nominal sensitivity for 0dBu output: -35dBu (guitar), -15dBu (keyboard). Unbalanced jack connector. Output: Impedance: <10. Max level: +22dBu into 600. Balanced XLR connector. Frequency response: 20Hz to 40kHz +0 / -1dB. Power supply: 110-120v or 220-240v AC. Power consumption: 20VA typical. Dimensions: 406 x 203 x 76mm. Optional 19" rack ears, 2U high. Weight: 3 kg. Shipping Weight: 4 kg.



**C-1 Dual Valve Compressor** 

In just three years, the C-1 Dual Valve Compressor has established itself as an industry standard dynamics processor. Rather than slavishly imitating designs of the past, we developed a compressor that combines unrivalled sound quality with superb flexibility: the C-1 is designed to be used - all the time!

All controls are continuously variable (unlike some other valve units with switched parameters) and high quality onboard mic pre amps allow direct-to-tape recording of microphone sources. Stereo front panel auxiliary inputs mean a keyboard or guitar can feed straight into the C-1 and down to tape with a minimum of fuss. Whether the C-1 is tracking vocals and instruments or adding roundness and warmth to a complete mix, it will become an indispensable part of your signal path within hours.

The C-1 features a low noise solid state pre amp followed by two valve stages per channel. The valves are twin triode ECC83 / 12 AX7A types, run from a stabilised 250v DC power supply. The first valve stage acts as a voltage amplifier, with the second stage forming part of the gain control element. The gain control is performed by our own unique transconductance stage which avoids the use of VCAs - thus improving transparency and minimising distortion, which is virtually constant at 0.05% over the full bandwidth. The frequency response of the C-1 is virtually flat between 20Hz and 40kHz, and measured between -3dB points, the C-1's bandwidth is a staggering 5Hz to 70kHz!

- 2 channels of soft knee, variable ratio compression
- Balanced mic and line level inputs
- Balanced line outputs, switchable for -10dB or +4dB operation
- Unbalanced jack I/O connections
- Stereo front panel auxiliary inputs with gain control and sensitivity switch (for guitar or keyboards etc.)
- Sidechain insert points for frequency conscious compression
- 48v phantom power

- 90Hz high pass filter switch (12dB / octave). Applies to all inputs
- Continuously variable Input Gain, Threshold, Attack / Release times, Compression Ratio and Gain Make Up
- Program dependent compression characteristic- attack and release times automatically adjust in response to program material
- 'Stereo Link' mode gangs Threshold, Attack, Release and Ratio controls for processing stereo signal sources
- Illuminated VU meters allow monitoring of either output level or gain reduction
- Bypass switch with LED
- Frequency response 20Hz to 40kHz +0 / -1dB

Mic Input: Impedance: > 10k. Gain range: +16 to +60dB. Input noise (EIN): -126 dBu (22Hz-22kHz). Max input level: +10dBu. Balanced XLR connector. Line Input: (Balanced) Impedance: > 5k. Gain range: -10dB to +35dB. Max input level: +30dBu. XLR connector. (Unbalanced) Impedance: > 5k. Gain range: -10dB to +35dB. Max input level: +24dBu. Jack connector. Auxiliary input: Two unbalanced jack connectors for stereo operation, or Input A may be used to drive both channels. Max input level: +10dBu. Switchable sensitivity for guitar or keyboards. Output: Balanced output impedance: < 10. Max level: +22dBu into 600. Unbalanced output impedance: 47. Max level: +20dBu into 10k. Sidechain insert point: stereo jack, tip=send, ring=return. Nominal level -2dBu. Output impedance: 47, Return input impedance: 10k. Compressor Functions (all continuously variable):- Threshold: -20dBu to +20dBu. Attack: 0.5mS to 50mS. Release: 40mS to 4S. Ratio: 1:1.5 to 1:30. Gain Make Up: 0dB to +20dB. Frequency response: 20Hz to 40kHz +0 / -1dB. Distortion: 0.05% (10Hz-40kHz). Dynamic Range: 100dB. Power supply: 110-120v or 220-240v AC. Power consumption: 30VA typical. Dimensions: 483 x 205 x 88mm (19" 2U). Weight: 5kg Shipping Weight: 6kg.



**VI-1 8 Channel Valve Interface** 

The VI-1 has been developed as a direct result of the phenomenal growth in popularity of affordable digital multitrack recorders (both tape-based and hard disc systems). While these machines boast stunningly clean and quiet performance, most users recognise that the resultant sound is somewhat cold and clinical.

The VI-1 is an 8 channel unit designed to interface between the recording console and the multitrack machine. Each channel has unity gain - so the signal levels through the unit are unaffected - but since each channel incorporates a valve stage, the audio signal benefits from the warmth of the valve characteristic. The combination provides the perfect marriage of pristine digital quality with valve richness, yet functionally the VI-1 is simplicity itself.

The unit can be patched ahead of the recorder inputs during track laying, then hooked up to the recorder outputs on mixdown - effectively giving two stages of valve processing. The result? A much smoother, more integrated mix that positively oozes warmth and definition. Other applications for the VI-1 are many and varied - from a front end for A-D conversion through to use as a "warming" device for mixing to DAT.

The VI-1 uses the proven ECC83/ 12AX7A valve (one valve stage per channel) run from a stabilised 250v DC power supply. In common with other TL Audio units, the VI-1 exhibits a very flat frequency response, low distortion and impeccable noise performance.

- 8 channels of characteristic valve warmth
- Balanced input and output on each channel (via stereo jack connectors)
- All inputs and outputs compatible with unbalanced signals
- Operating levels of each input and output may be individually optimised for -10dB or +4dB (via internal links)

- Frequency response 10Hz to 40kHz  $\pm 0.5$ dB
- 108dB dynamic range (equivalent to 18 bit digital performance)
- ECC83 / 12AX7A valves run from stabilised 250v DC supply
- Simple to operate

#### Ideal for use with:

- Tape based digital multitrack recording & mixing systems
- Stand-alone digital hard disk multitrack recording & mixing units
- Computer-based hard disk recording systems
- Digital mixing consoles
- Mastering to DAT
- A to D convertors



## **VI-S Switching Unit**

Designed to work in conjunction with the VI-1, the VI-S is an 8 channel passive switcher unit that enables easy repatching of the VI-1 within the signal chain.

The VI-S provides rear panel connections allowing it to be patched to and from the console, recorder and VI-1. Once connected, a record / playback switch on each channel of the VI-S allows the VI-1 to be patched between the console tape outputs and recorder inputs ("record mode") or between the recorder outputs and console tape inputs ("playback mode"). Switches on the VI-S permit individual bypassing of each channel of the VI-1 if required.

# **VI-1 SPECIFICATIONS**

Line Input: Impedance: > 10k per leg. Max input level: +18 dBu. Balanced jack connector (Unbalanced compatible). Internally adjustable for +4dBu or -10dBu

nominal level. Output: Impedance: 47. Max level: +18dBu into 10k. Balanced jack connector (Unbalanced compatible). Internally adjustable for +4dBu or - 10dBu nominal level. Frequency response: 10Hz - 40kHz +0 / -0.5 dB. Noise: - 90dBu, 22Hz-22kHz. Power supply: 110-120v or 220-240v AC. Power consumption: 30VA typical. Dimensions: 483 x 205 x 88mm (19" 2U). Weight: 5kg Shipping Weight: 6kg.

## **VI-S SPECIFICATIONS**

Passive unit, all inputs and outputs on balanced jack connectors (unbalanced compatible). Dimensions: 483 x 95 x 88mm (19" 2U). Weight: 4kg Shipping Weight: 5kg.