

# JL1 TRIODE MONO AMPLIFIER

**P**hilosophy is the most important aspect of any design. CAT's philosophy is to design our products to neither add to, nor detract from, the music. We never attempt to cover up a design problem with another problem, nor do we try to introduce a supposedly complementary problem to "synergise" with it. Two wrongs do not make a right. Only the eradication of the problem is correct.

The JL1 has been under development for over six years. We used a variety of loudspeakers during this refinement process, including some which are well known for their ultra revealing nature and their difficulty to drive. The resulting amplifier is astounding in its robust dynamics and effortless power, actually sounding bigger and more powerful than amps with higher power ratings. Yet it possesses a pure, natural character and clarity that surpasses the most refined amplifiers.

The innovative design of the power supply, audio circuitry, chassis construction and output transformer combine to produce an amplifier that will force you to reevaluate your reference standards

## POWER SUPPLY

- The power transformer is encased in separate nickel plated steel housing to contain its magnetic field.
- The isolation transformer eliminates entry of AC power line noise into the amp, yielding greater benefits than add-on conditioners without any of their sonic drawbacks or expense.
- Slow filament power-up greatly extends tube life.
- The quadruple cascaded audio power supply uses time compensated zero feedback mosfets and vacuum tubes to deliver unequalled dynamic contrast, transparency and sound stage realism.

## CIRCUITRY

- Pure triode audio circuitry produces tonally natural music by eliminating the partition noise inherent in pentode designs and the resulting noise intermodulation ("grain").
- Low feedback (about 7 dB) properly compensated design eliminates the tonal hardness of high feedback and/or improperly compensated designs while yielding more consistent sound quality.
- Ultra-wide open loop **in-circuit** bandwidth of the output transformer enables operation of the amp's closed loop response entirely within the open loop response, eliminating any requirement for the output stage to perform beyond its natural capability.
- Massive 55 lb. output transformer allows gapping of the core for maximum linearity while still maintaining extremely low bass extension.
- Unprecedented stability into capacitive loads.

## CHASSIS

- The very heavy steel chassis is reinforced with several welded beams for tremendous strength and the elimination of low frequency vibration.
- Constrained dampening layer on top plate silences vibration before it can be converted to electro-mechanical noise.
- The output transformer is enclosed within its own magnetically isolated housing which is lined with Birch plywood (one of the most musical woods) and potted in place with a combination of epoxy and elastomers for mechanical stability and control.
- Mechanical isolation from floor vibration provided by high loss viscoelastic feet.

## CONVENIENCE

- Dual symmetrical input jacks and output posts on both sides of the JL1 facilitate ease of setup and wiring for any chosen configuration.
- Gold plated engraved brass plates and mirror polished stainless steel maintain luster and brilliance with minimal care.
- Single 10 turn master bias control assures utmost sonic capability with minimum effort (meter included with pair of amps).

## SPECIFICATIONS

- Power:** 100 watts into 8 ohms - class A (with Sovtek 6550s; more with other brands of 6550s, or other types of output tubes), 100 watts into 4 ohms.
- Frequency Response:** 1 Hz to 70k Hz (+0, -3 dB)
- Gain:** 30.6 dB (8 ohms)
- Sensitivity:** 835 mv AC for full power (8 ohms)
- Noise:** 110 dB below full power
- Power Bandwidth:** 7 Hz to 40k Hz
- Damping Factor:** 10
- Net Weight:** 190 lb. (each)
- Tube Complement:** 8 output tubes: 6550, KT88 or KT90 (equal or greater power) KT77, EL34, 6CA7, 5881 (less power) 2 x ECC88, 1 x ECC82, 1 x ECC83
- Dimensions:** 27" x 16" x 10 1/2" (L:W:H)

## SHIPPING WEIGHT

- 200 lb. (each in cardboard)
- 240 lb. (each in wood crate)

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