

Traction Engine 4|1000-N

Power Amplifier



The 4|1000-N offers the assurance of our highest quality audio power amp technology with future proofing via the optional inclusion of simple to use digital audio networking.

A powerful and robust 4 channel power amplifier boasting high power output and exceptional sound quality. Useable as a stand alone unit, or as a secondary amp taking its input from the Aux outputs of a Traction Engine DSP amplifier. Pairs of output channels can be bridged to deliver even more power, for use with our high output subwoofer products

Running cool in even the most difficult conditions, the 4|1000-N can deliver 4 x 1000W into 4 ohms with all channels driven, and an substantial 2 x 2400W bridged (4R), with outstanding distortion and noise figures right up to maximum output. This power is maintained even with reduced mains voltages thanks to generous limiter headroom.

Parallel wiring of channels A and C to output sockets B and D respectively means less complicated setup and more options when designing systems.

Main Specifications

| | |
|--|--|
| Output Power (per channel): <small>Measured using continuous music with Crest Factor of 48 (14dB)</small> | 8 ohms: 500W, 4 ohms: 1000W, 27 ohms: 1400W, 2 ohms: 1200W* |
| Output Power (bridged): <small>Measured using continuous music with Crest Factor of 48 (14dB)</small> | 8 ohms : 2000W, 4 ohms: 2400W |
| THD: (0dB below maximum output power) | ● 1kHz: <0.08% 20Hz to 20kHz: <0.2% |
| Gain / Sensitivity: | Gain: 32dB Sensitivity (for maximum power): +6.2dBu (16V) |
| Frequency Response: | 20Hz to 20kHz (+0.5dB) |
| Power Consumption: | Nominal ● 240V into 4 ohms: 2.9A Nominal ● 120V into 4 ohms: 6.0A |
| Dimensions: | Amplifier (2U) (mm): 88(h) x 482(w) x 428(d) Boxed (shipping size - UK): 230 x 580 x 560 (Single boxed) |
| Weight: | Amplifier: 10.0kg Boxed (shipping weight): 12.0kg |

Additional Specifications

| | |
|----------------------------|---|
| Input Impedance: | 20k ohms (Active balanced) |
| Input CMRR: | > 60dB |
| Input Sources: | 4 x Analogue |
| Signal Limiters: | Operate at maximum power to prevent excessive clipping |
| Protection: | Output short circuit, DC: Over-temperature: Mains in-rush control, over voltage, over current |
| Output Power(per channel): | Continuous music (with Crest Factor of 2.8 (9dB)): 485W (8R), 970W (4R), 1365W (2.7R) Continuous music (with Crest Factor of 4.8 (14dB)): 500W(8R), 1000W(4R), 1400W(2.7R) Continuous music (with Crest Factor of 7.8 (18dB)): 515W(8R), 1025W (4R), 1435W (2.7R) |

*27 ohm power quoted for highest single ended output and greatest efficiency (3 x 8 ohm parallel drivers). Amplifier is stable with 2 ohm loads but output will be reduced.

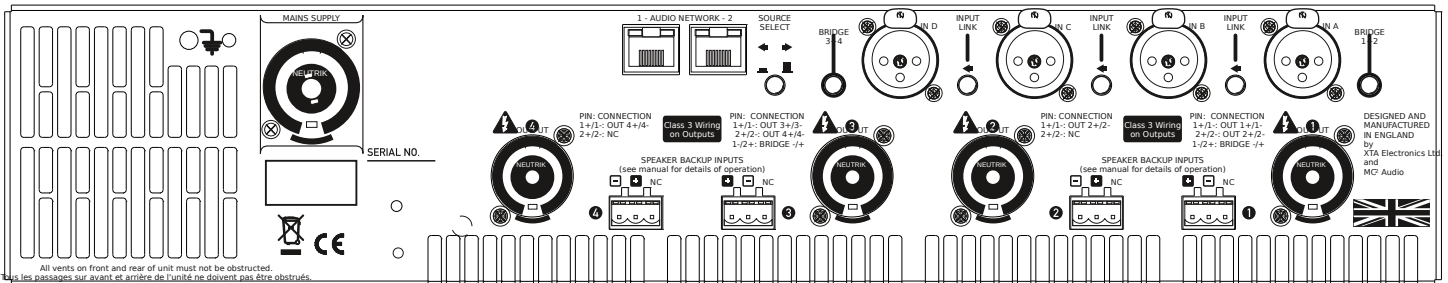
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Power Consumption & Thermal Emissions

| Mains (V) | Load (R) | Current Draw (A) | | | | Thermal Emissions (W) | | | |
|-----------|----------|------------------|-------|---------|-------|-----------------------|-------|---------|-------|
| | | No Sig1 | Light | Average | Heavy | No Sig1 | Light | Average | Heavy |
| 240 | 8 | 1 | 14 | 21 | 37 | 240 | 251 | 269 | 312 |
| 240 | 4 | 1 | 17 | 29 | 58 | 240 | 258 | 290 | 266 |
| 240 | 2.7 | 1 | 19 | 34 | 71 | 240 | 264 | 304 | 402 |
| 120 | 8 | 22 | 30 | 44 | 77 | 267 | 277 | 295 | 338 |
| 120 | 4 | 22 | 36 | 60 | 117 | 267 | 285 | 317 | 392 |
| 120 | 2.7 | 22 | 40 | 71 | 145 | 267 | 290 | 331 | 428 |

No Sig1 = Quiescent, Light = Crest Factor of 7.8(18dB), Average = Crest Factor of 4.8(14dB), Heavy = Crest Factor of 2.8(9dB)
For details of measurement methods please refer to the Technical Support area of our website.



Controls, Indicators & Connectors

Front Panel: 1 x Power Switch, 1 x STBY LED (orange)
4 x 6 point LED level indicators, 4 x level controls
3 x Channel Audio link LEDs (yellow)
1 x protection LED (red), 2 x bridge LEDs (green)
1 x power LED, 1 x analogue LED, 1 x network LED (3 x yellow)

Rear Panel: 4 x Neutrik Speakon output connectors (4 pole)
4 x Neutrik XLR female connectors (audio input)
2 x Ethernet RJ45 (Audio Network)*
3 x Channel Link Switches
2 x Bridge Mode Switches
1 x Analogue/Network Audio Source Select Switch

Architect's and Engineer's Specification

The power amplifier shall be a 4 channel class D design with a minimum guaranteed power of 1000W into 4R (20Hz to 20kHz). THD shall be better than 0.18% (20Hz to 20kHz). The minimum load shall be 2R, and 4R in bridge mode. Input sensitivity shall be 8.3aBu for full power output. Frequency response shall be 20Hz to 20kHz (+0.5dB).

The front panel shall have individual input level controls each with a 6 point LED meter showing output level and onset of limiting. A front panel non-isolating main power switch shall be fitted. The rear panel shall have outputs on Neutrik Speakon connectors, with two being wired to allow channel pairs to be accessed from a single plug (4 pole).

The audio inputs shall be on Neutrik 3 pole XLR connectors. Mode switching between stereo/bridge shall be on the rear panel, per channel pair (1&2, 3&4). Inputs to channels shall be linkable via 3 channel link switches, with corresponding indication on the front panel.

The amplifier shall accept analogue or networked audio if fitted with the optional Dante network audio card with global source switching across all four channels on the rear panel and front panel indication of either analogue or digital source.

The amplifier shall be 2U, 19" rackmount in format with dimensions of 88cm X 48cm X 43cm and a weight of 10.0kg. AC mains supply shall be selectable (factory set only) between 120V(60Hz) and 240V(50Hz). The amplifier shall be designated the Traction Engine 4|1000-N.