





# **I-Tech Series**

# I-TECH 4000, 6000, 8000 power amplifiers for touring sound





**Power Output** Guaranteed minimum power in watts at 20 Hz-20 kHz with 0.35% THD

	2-ohm Dual (per ch.)						
Model Name	20 mS BURST	20 Hz - 20 kHz	1 kHz	4-ohm Dual (per ch)	8-ohm Dual (per ch)	4-ohm Bridge	8-ohm Bridge
I-T4000	2,565W	1,800W	1,800W	2,000W	1,250W	3,600W	4,000W
I-T6000	4,570W	2,500W	2,500W	3,000W	1,500W	5,000W	6,000W
I-T8000	5,900W	3,500W	3,500W	4,000W	2,100W	7,000W	8,000W

## **Features**

- Global Power Supply designed to deliver maximum power no matter where your schedule takes you
- Studio Quality Processing integrated processing reduces DSP noise for a quieter overall system
- Peak voltage and RMS power limiting protects your speaker investment
- Front panel LCD provides diagnostics and preset selection to ensure fast and easy system setun
- Front panel lockout ensures that tunings and presets are safely stored and protected from curious users
- Remote monitoring and control for complete system control anywhere in the venue



# **Specifications**

#### Performance

Frequency Response (at 1 watt, 20 Hz - 20 kHz): ±0.25dB.

Signal to Noise Ratio below rated full-bandwidth power, A-weighted: > 105 dB.

**Total Harmonic Distortion (THD)** at full rated power: < 0.35%.

**Intermodulation Distortion (IMD)** 60 Hz and 7 kHz at 4:1, from full rated output to -35 dB: < 0.35%.

Damping Factor (20 Hz to 100 Hz at 8 ohms): > 5000.

**Crosstalk** (below rated power, 20 Hz to 1 kHz): > 80 dB.

Common Mode Rejection (CMR) (20 Hz to 1 kHz): > 50 dB.

DC Output Offset (shorted input):  $< \pm 3$  mV.

**Input Impedance (nominal):** 20 kilohms balanced, 10 kilohms unbalanced.

**Maximum Input Level:** +15 dBu or +21 dBu, depending on input sensitivity.

Latency (analog, digital inputs): 1.13 mS analog, 1.81 mS digital (96 kHz).

A/D, D/A Converters: 24-bit 96 kHz Cirrus Logic.

**Digital Input:** AES/EBU, 24-bit, 32-96 kHz. Onboard sample-rate converter.

**Network:** Onboard TCP/IQ and HiQnet, compatible with standard 100 Mb Ethernet hardware.

**DSP:** 24-bit conversion with 32-bit, floating-point DSP processing. Has 64 assignable filters with 9 different filter types. Includes all-pass filters, over 2 seconds of delay available per channel, and dual uncorrelated-noise and sine-wave generators.

Load Supervision: Monitors the average impedance on the output of the amplifier. If the impedance falls outside the specified high/low limits, this function alerts the user via the front panel display, and via System Architect or IOwic™ software.

Error Reporting: Reports clip errors, thermal errors, fault conditions and load monitoring errors for each channel via the front panel display and via System Architect or IOwic software when amp is on a network.

**Attenuators:** Speed sensitive, continuously variable rotary encoder, 0.5 dB steps, range 0 to -100 dB.

**Load Impedance:** (Note: Safe with all types of loads) Stereo: 1/2/4/8/16 ohms. Bridge Mono: 2/4/8 ohms.

**Input Sensitivity (referenced to 8 ohm rated output):** Adjustable in 0.1V steps from 1.4V to 7.75V.

Voltage Gain (referenced to 8 ohm rated output):

I-T4000: 37.1 dB to 22.2 dB I-T6000: 37.9 dB to 23.0 dB I-T8000: 39.3 dB to 24.5 dB

**Required AC Mains:** Universal AC input, 100-240VAC, 50/60 Hz (±15%). Maximum AC mains voltage 277VAC.

**AC Line Connector:** Five cordsets supplied with amplifier (USA, UK, European, Australia, India).

### Front Panel Controls and Indicators

**Bridge Mode Indicator:** Yellow LED illuminates when the amplifier is set to Bridge-Mono mode.

**Ready Indicator:** Green LED, one per channel, illuminates when the channel is initialized and ready to produce audio

output. Indicator is off when the amplifier is in standby mode via the control software.

**Signal Indicators:** Three green LEDs per channel indicate the amplifier's input and output signal levels.

Signal: input signal is above –40 dBu. –20 dB: amplifier output is 20 dB below clipping. –10 dB: amplifier output is 10 dB below clipping.

Clip Indicator: Red LED, one per channel, illuminates when the channel's output signal reaches the onset of audible clipping. The Clip Indicator also will illuminate during Thermal Level Control (TLC) limiting.

Thermal Indicator: Red LED, one per channel, illuminates when the channel has shut down due to thermal stress or overload.

**Fault Indicator:** Red LED, one per channel, flashes when the amplifier output channel has stopped operating.

**Data Indicator:** Yellow LED indicates network data activity. Data indicator flashes only when the amplifier is polled for data, or is polled to see whether it is online

**Power Indicator:** Blue LED indicates amplifier has been turned on and AC power is available. The LED will flash when the AC line voltage is 15% above or below the nominal rated value.

**AC Mains Present Indicator:** Green indicator built into power switch indicates AC power is present at the power cord and the amplifier circuit breaker is in the "on" position.

**LCD Control Screen and Controls:** These let the user adjust the amplifier's attenuation and muting, configure the amp, set up and view error monitoring (such as temperature and load supervision), and recall DSP presets. The presets allow the user to quickly reconfigure the amp for various applications.

**LCD Control Screen:** Integrated LCD with white LED backlight, controls amplifier setup and operation.

**Normal mode:** Attenuation in 0.5 dB steps, Mute/ Unmute. Front Panel Lockout.

**Basic Menu:** LCD Contrast, CH1 Sensitivity, CH2 Sensitivity, Speaker Preset, Dual/Bridge mode, Input Y.

Advanced Menu: Attenuator Limits, Attenuator Link, Clip Limiter, Peak Voltage Limiter, Average Power Limiter, Pink Noise Generator, AES/EBU Input Trim, Input Source, Maximum Analog Input, Meter Display Type.

Monitor Menu: Speaker Load, Thermal %, AC Voltage, Operating Time, Firmware, Manufacturing Info, Networking, Thermal Errors, Clip Errors, Low Limit Load Errors, High Limit Load Errors, Line Voltage Errors.

**Menu/Exit Button:** "Menu" enters the main menu. "Exit" gets out of the Menu.

Next Button: Selects the next item in the Menu.

Prev Button: Selects the previous item in the Menu.

**Level Controls (Encoders):** Speed-sensitive rotary encoders, 0.5 dB steps, range 0 to –100 dB. These two knobs affect the Channel-1 and Channel-2 output levels. They also select Menu items and adjust parameter values that are displayed on the LCD Control Screen

**Power Switch:** Push-on/push-off switch with built-in green AC mains present indicator.

## **Back Panel Controls, Indicators and Connectors**

**Power Cord Connector:** Standard 20 amp IEC inlet. Voltage range is indicated above IEC inlet.

Reset Switch/Circuit Breaker: If the current draw of the

# **I-Tech Series**

amplifier exceeds safe limits, this breaker automatically disconnects the power supply from the AC mains. The switch resets the circuit breaker.

Output Connectors: Two high-current, 50A Neutrik® Speakon® NL4MLP (mates with NL4FC or NL4), one per channel. Two pairs of high-current, 60A color-coded 5-way binding posts (for banana plugs, spade lugs or bare wire). Two male XLR passive analog loop through. XLR active/re-clocked AES/EBU digital loop through.

**Analog Input Connectors:** A 3-pin female XLR connector for each channel

**Digital Input Connector:** A 3-pin female XLR connector that accepts a digital signal in the AES/EBU format.

**Network Connector:** This Ethernet connector accepts an RJ-45 connector for TCP/IQ or HiQnet networking. Built into the connector is a yellow LINK ACT indicator that shows network activity, and a green 100Mb indicator that shows a 100Mb network connection.

**Data Indicator:** Yellow LED indicates network data activity. Data indicator flashes only when the amplifier is polled for data, or is polled to see whether it is online.

**Preset Indicator:** Yellow LED flashes to signal the number of the current preset if active.

#### Construction

**Cooling:** Dual-zone, microprocessor controlled, continuously variable speed fans, front-to-back airflow.

Front Panel: Cast aluminum with integrated handles.

**Dimensions:** 19 in. (48.3 cm) W x 3.5 in. (8.9 cm) H x 16.2 in. (41.1 cm) D.

Weight: 28 lbs (12.7 kg) net, 36 lbs (16.3 kg) shipping.

**Included Accessories:** Rear rack ears, rack screws, operation manual, power cords, foam air filter.



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