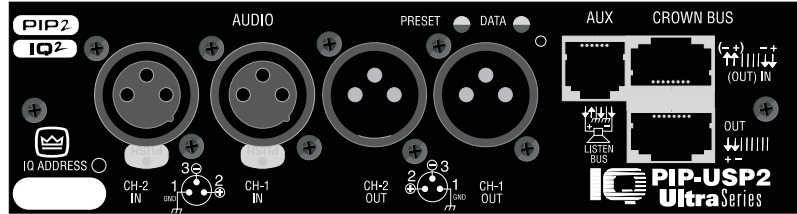


IQ ULTRA SERIES

IQ-PIP-USP2



Designed for use with PIP²-compatible amplifiers*, the IQ-PIP-USP2 connects the amplifier to the Crown Bus of an IQ System, allowing the amplifier to be controlled and monitored via IQ.

The IQ-PIP-USP2 offers an extensive list of features, including output signal delay for precise signal matching, auto standby for reduced energy costs, plus eight independent, fully adjustable filters per channel.

The IQ-PIP-USP2 also provides on-screen error reporting of fault, short (high temperature), and excessive distortion, so you can know quickly if any changes occur in your amplifier's status. Meanwhile, the IQ-PIP-USP2's real-time load supervision feature ensures you will be notified immediately of any catastrophic changes to the load.

Offering crisp, clear sound and the widest dynamic range possible with full 24-bit signal processing, the IQ-PIP-USP2 provides amazing power and flexibility in one compact—and very affordable—module.

For more details about the Crown IQ-PIP-USP2, contact the Crown Technical Support Group at 800-342-6939 or 219-294-8200. Also, visit the Crown Audio website at www.crownaudio.com.

* Many older PIP-compatible amplifiers can be modified for use with the IQ-PIP-USP2 via the IQ-PIP-USP2 Adapter. Visit www.crownaudio.com or contact your dealer or Crown's Technical Support Group for details.

Specifications

General

Internal Controls: An 8-segment DIP switch sets the IQ address (decimal range: 1–250).* A 4-segment DIP switch sets input and output sensitivity/gain. A Reset/Presets switch, accessible with a straightened paper clip through the PIP panel, selects the next user preset if pressed for less than 2 seconds, resets the PIP to preset "0" if pressed for more than 2 seconds, or re-writes from firmware to flash memory restoring all settings to factory default if pressed while applying power. Jumpers select thru or processed signal for daisy output of each channel.

* If address "0" is selected, the IQ-PIP-USP2 will operate in stand-alone mode. In this mode, the Crown bus port is deactivated.

Connectors: Crown Bus: RJ-45 connector for input/output, RJ-45 connector for daisy output.

Features

- 24-bit analog to digital conversion, and 24/48 bit DSP processing.
- Free IQ for Windows software provides easy setup and monitoring of all IQ-PIP-USP2 parameters.
- Up to seven different filter types are available for a total of 16 filters on-board.
- Greater than one half-second of delay available per channel.

- User-selectable presets for easy recall of settings.
- Load supervision for real-time warning of load problems.
- Listen Bus allows easy connection to an audio monitoring system.
- Reliable FLASH memory backs up all parameters.
- The best three-year "No-Fault" full warranty in the business!

AUX In/Aux Out/Listen Bus: RJ-11 connector.
Audio Input: Balanced 3-pin female XLR connector for each channel. Audio "Daisy Chain" Output: Balanced 3-pin male XLR connector for each channel.

Indicators: A yellow DATA indicator flashes when a valid IQ command is received from the IQ System via the Crown Bus. The DATA indicator can be forced on to facilitate rapid troubleshooting of Crown Bus wiring. A green PRESET indicator flashes to indicate the user preset number currently selected in memory. If the PRESET indicator does not flash the preset number when selected, this indicates the preset has been modified by the user.

Memory Backup: 1 Mbyte non-volatile FLASH memory for backup of run-time parameters, presets, and program storage. Capable of 80,000 writes minimum.

Power Requirements: Power draw: 240 mA @ +24 VDC and 65 mA @ -24 VDC. When installed into a Crown PIP-compatible amplifier, the unit receives ±24 VDC from the amplifier. No external power is required.

Total Power Dissipation: 7.4 watts.

Crown Bus Data Communication

Protection: If communication is lost, the unit will continue to function with the last commands received.

Data Rate: 38.4 K BAUD.

Data Format: Serial, binary, asynchronous; 1 start bit; 1 stop bit; 8 data bits; no parity.

Crown Bus Interface Type: Optically isolated 20 milliamp serial loop.

Operation: Half duplex.

Transmission Distance: Variable from 200 to

3000 feet (61 to 914 m), depending upon wire capacitance. Typically 1000 feet (305 M) using shielded twisted-pair wire, #26 AWG or larger. Can be extended with an IQ Repeater.

Audio

Please note: The audio specifications are referenced to 0.775 V (0 dBu). Measurements were made at the output of the IQ-PIP-USP2 module, itself.

Digital Signal Processor (DSP): 60 MHz Motorola 56002 DSP processor provides 30 million operations per second.

Analog to Digital Conversion (ADC): 24-bit, 48 kHz sample rate, Delta-Sigma converter.

Digital to Analog Conversion (DAC): 24-bit, 48 kHz sample rate, Delta-Sigma converter.

Input Impedance: Nominally 20 k ohms balanced and 10 k ohms unbalanced.

Maximum Input Level: +20 dBu.

Dynamic Range: >100 dB (A-weighted, 20 Hz to 20 kHz).

Frequency Response: ±0.5 dB from 20 Hz to 20 kHz.

Common Mode Rejection (CMR): 50 dB (typical).

Total Harmonic Distortion + Noise (THD+N): <0.05% (1 kHz, 0dBu).

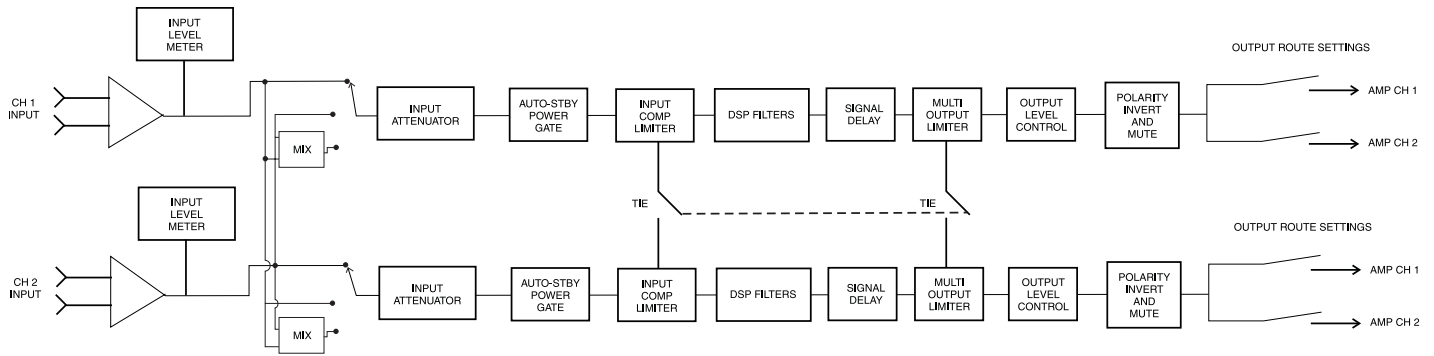
Daisy Output Impedance: Nominally 150 ohms (balanced).

Maximum Output Level: +20 dBu.

IQ System Data Acquisition

Input/Output Monitor Accuracy: Typically ±1 dB.

IQ-PIP-USP2



IQ-PIP-USP2 Signal Flow Block Diagram

Crown's Three-Year, No-Fault, Fully Transferrable Warranty

Crown offers a Three-Year, No-Fault, Fully Transferrable Warranty for every new Crown IQ component—an unsurpassed industry standard. With this unprecedented No-Fault protection, your new Crown IQ component is warranted to meet or exceed original specifications for the first three years of ownership. During this time, if your IQ component fails, or does not perform to original specifications, it will be repaired or replaced at our expense. About the only things not covered by this warranty are those losses normally covered by insurance and those caused by intentional abuse. And the coverage is transferable, should you sell your IQ component.

See your authorized Crown dealer for full warranty disclosure and details. For customers outside of the USA, please contact your authorized Crown distributor for warranty information or call 219-294-8200.



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Specifications subject to change without prior notice. Latest information available at www.crownaudio.com.

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