

# PRO AUDIO REVIEW

Gear & Software Reviews For The End-User

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## Live

BY DAVID RITTENHOUSE

In this day and age of smart bombs and smart cars comes the first truly smart amp. No, it won't unload itself off the truck and hook itself in to the system for you, but the Crown I-Tech 8000 does have a built in digital signal processor (DSP) and software to manage every aspect of the systems operation. No PIP cards - a real onboard fully programmable DSP!

### FEATURES

Crown's new I-Tech series comes in three versions, the 4000, 6000 and the 8000 - all related to the combined power output at 4 ohms. They all weigh in at an astounding 28 pounds and only take up two rack spaces. The amps feature a global power supply with power factor correction (PFC). What this means is that the amp can be taken anywhere on the planet and function, 85V - 277V. If you are in North America with voltages running from 110V to 125V, or in Europe with voltages from 230V to 250V it will work with out needing a separate step-up or down transformer.

Inputs to the amp are standard XLR as

### Fast Facts

- **Applications:**  
*Live sound, contracting/install*
- **Key Features:**  
*Two-channel; level controls; slot for Crown IQ module; compatible with Crown IQ system*
- **Price:**  
\$7,685
- **Contact:**  
*Crown at 574-294-8200,  
www.crownaudio.com.*

## Crown I-Tech 8000 Power Amplifier



well as AES/EBU digital inputs. There is a link output as well for sending signal to other amps. Outputs consist of Neutrik Speakon NL4s per channel with one NL4 taking both amp channel outputs down a single NL4. There are also five-way binding posts for each channel out. The direct digital inputs run with the amp's 24-bit/96 kHz converters. Frequency response is  $\pm 0.25$  dB from 20 Hz to 20 kHz with the signal to noise ratio being  $>105$ dB A-weighted. The damping factor is an outstanding  $>5000$  from 20 Hz to 100 Hz. The I-Tech series claims to have the highest output voltage, currently in the industry, with 200V output at peak.

Front panel controls are set around an LCD screen that is backlit with white LEDs. All control aspects can be

accessed from the front panel, with a laptop needed only for DSP programming. Having a network of I-Techs connected to the laptop management software is an amazingly functional tool; but I'll get to that more in just a minute. At the front of the amp are the bridge mode, power and data indicators along with the "cool" green glowing (when power is present) power switch. Each channel has its virtual control knob (encoder), indicator lights, ready, signal, -20 dB, -10 dB being green with clip, thermal, and fault being red. For access to menu/DSP functions from the front panel there are menu/exit, next and previous buttons. The DSP has some truly innovative functions such as real time load monitoring, adjustable voltage gain, attenuators from

0 to 100 dB in 0.5 dB steps and error reporting for faults, thermal, voltage, or load monitoring problems.

The network capabilities of the I-Tech series are done through Crown's IQwic software which is downloadable from Crown's website. The network is functional over a standard CAT-5 network to each amp. If there is more than one amp in the network, you will need a network switch at each rack of amplifiers. Using the network, you can set every function of the DSP. Limiter settings alone involve clip, average power, and peak voltage. For creating speaker processing, you are given 64 assignable filters with nine different filter types and all forms of pass filters. Up to a two-second delay is also available per channel for time aligning components. These all can be compiled to up to 10 presets that are recallable from the front panel without using a laptop.

So what does all this mean? Well, all you would ever need at front of house is a compressor/limiter (always for safety) and an EQ, no more crossover and speaker processing gear. If you have a digital console just a single cable to the amps. Sweet!

## **IN USE**

Since this amp is fairly new, I did not have the time to run it through my normal paces. With that said, I tried to beat it up

as much as possible. Wow! 8,000 watts at 4 ohms not 2 ohms. Power and I mean power, but as impressive as that is may be it's the software and DSP that really rock. The representative for Crown said first thing, to try and beat the amp up, "give it everything, see what it will do!"

After sitting down with the software and creating a few programs I have to say that the ease of use is fantastic. I found the IQwic software to be very user-friendly. Once I had the programs created, I stored them to the presets available. One downfall I noticed was that you can only store 10 presets. If you have a company that works with a lot of different speaker manufactures or have a vast inventory of multiple speaker configurations ten presets will not be enough. [Editor's Note: Crown is working on a firmware update to increase the number of presets]

I ran the first listen with a pair of EAW KF300s and an SB850 sub. With every aspect instantly accessible on the laptop making changes to filters or attenuation was easy. I have always like the tonal qualities of Crown amps versus other manufactures, but Crown, until now, had always been a little antiquated, in my opinion. Looking at the load management I could see in real-time the load fluctuate from 3 ohms to 2 ohms. Fully monitoring the input and output of the

amp was right there at my fingertips. This is the sort of product that can make the systems tech job of a large touring rig a breeze. Next I figured I would drive the amp to a much lower ohm rating than usual. Three subs running off of one side of the amp brought the amp to lower than 2 ohms. Peaks showed 1 ohm and the amp showed an error for the limit was set to show at less than 2 ohms yet the amp still didn't quit. I was thrilled.

## **SUMMARY**

The Crown I-Tech not only can replace your existing amplifiers, but a pile of other gear as well. Efficiency, power, and ease of use place the I-Tech series at the top of my list. If you already own specific processing gear it will be hard to pass on the investment you have already made, but when you want the more efficient way of the future, you can find it now in the form of the Crown I-Tech. So long Macro-Tech!

*David Rittenhouse is a senior live sound engineer at RCI Sound Systems and a regular contributor to Pro Audio Review.*

## **Review Setup:**

*EAW KF300 speakers; EAW SB850 subwoofers; Yamaha PM3500 console; Mackie VLZ 1402 mixer; BSS FDS960 EQs; dbx Drive Rack 480 processor.*