

TC ELECTRONIC KONNEKT 24D

AUDIO AND MIDI INTERFACE (MAC, PC)

by Stephen Fortner



<p>The Konnekt's new mic preamp design is clean, open, and detailed, and thoroughly lives up to TC's claims.</p>	<p>Hit this button to switch channels 1 and 2 to the balanced line inputs on the rear panel.</p>	<p>Source level knob is the endless type, doubles as a panner, and can access settings for the built-in effects, for when you're not "konnekted" to a computer.</p>	
<p>This button both activates the instrument input, and puts a pad on the mic input.</p>	<p>XLR combo jacks also take 1/4" inputs in the center, connected to a discrete input circuit meant for hi-Z instruments like guitar or a vintage Rhodes.</p>	<p>You can save three complete setups of routing, mix, and effects settings, then recall them from the front panel, also with no computer hooked up.</p>	<p>One headphone jack mutes the main outs when you plug in a pair of cans; the other does not.</p>

“Not just another audio interface,” says TC’s ad campaign for the Konnekt 24D. That’s a tough sell – compact FireWire interfaces have become a staple for mobile recording, gigging with soft synths, even as the main computer recording rig in home studios. We might wonder how we did without these half-rack boxes a few years ago, but we no longer get excited about them. Or do we?

OVERVIEW

Given what TC crams into the Konnekt 24D (24D for short), we just might. Its mic preamps, high-quality A/D and D/A conversion with jitter reduction, and analog volume control share credit for exceptional sound quality, which I can confirm. As you turn down the monitor volume knob on many audio interfaces, the unit uses less than the full amount of bits. A wide-open analog output stage then amplifies that lower-res signal, so it’s potentially noisier. The 24D works the opposite way, putting an analog pot downstream of a wide-open D/A converter.

Next, the 24D includes high-end effects from TC’s PowerCore DSP accelerator (see “High End Effects” on page 62), and a chip to run them so they don’t tax your computer. The 24D also lets you create routing presets from its software console window, recalling them in the field from the front panel. This essentially makes it a mini digital mixer. You can daisy-chain up to four units via FireWire, and your DAW will see ins and outs for all of them.

IN USE

To test an audio interface and your sanity, max out its inputs by recording a live band *while* playing keyboards in that band, as I recently did. I took the two singers’ mics and my keyboard mix into the 24D’s analog ins, and used a Presonus Digimax FS connected via lightpipe for all other mic- and line-level signals in the band. I recorded to the internal hard drive of a MacBook Pro (reviewed Sept. ‘06) running MOTU Digital Performer 5, at 24 bits, 44.1kHz, and a buffer setting of 128 samples.

Since it’s my job to push my luck and tell you what happens, I simultaneously used the 24D as a monitor mixer, feeding a pair of Mackie SRM-450 powered speakers from its main outs. ADAT channels show up as stereo pairs in TC’s software console, and though I would have preferred eight mono faders for monitoring, I could of

FireWire audio interface with built-in DSP effects and stand-alone mixing.

PROS

Audiophile sound quality. Mic pres are far better than usual for an audio interface at this price. High-end reverb and EQ/compressor effects included. Headphone outputs play loud and clean.

CONS

At this time, included DSP-based effects can’t be automated, nor accessed as inserts from your DAW’s mixer window. No dedicated word clock I/O.

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JARGON JOCKEY

- **Hi-Z:** Tech speak for “high impedance.” It’s the overall signal level you get from passive instruments like an electric guitar or vintage Rhodes piano. It requires a different input circuit than line level inputs (though both usually use 1/4" connectors) to sound right.

- **DSP:** Digital Signal Processor. This usually refers to a dedicated microchip, like the one in the Konnekt 24D, that runs monitor mixing and effects so your computer’s processor doesn’t have to.

CLAIM CHECK

TC’s Mike Martin says, “For the studio musician, Konnekt 24D’s I/O is flexible enough for a variety of analog and digital sources. Its IMPACT mic preamps and Hi-Z guitar inputs offer pristine signal quality, and a variety of digital inputs provide connectivity for synthesizers and other digital gear. Musicians using virtual instruments will love that they can use its world-class effects without any additional load on their computers.

“Konnekt 24D is also ideal for gigging musicians, because it functions as a stand-alone digital mixer. You can store the routing of Konnekt 24D’s inputs, outputs, and effects in scenes which you can then instantly recall and even edit, right from the front panel. Its outputs can easily allow for one stage mix and a separate signal to go to the house PA system.”



HIGH-END EFFECTS

You access two included effects from the Konnekt 24D’s software console. Fabrik R is an amazing-sounding reverb with four algorithms: Live, Plate, Club, and Hall. Fabrik C is a virtual channel strip combining parametric EQ with compression. Both use what TC calls Meta Intuitive Navigation Technology, in which you drag poker chip-like icons around a X-Y grid to make settings. In Fabrik C (shown) you can drop the “Source” chip into a square to optimize C for your source material — very slick. Routing options let you monitor or track with effects (internal mode) or apply them to existing tracks in your DAW via send/return mode. They’re not exactly “plug-ins,” because unlike with TC’s PowerCore, you won’t see the Fabriks in your DAW’s insert menu. You get one stereo instance of Fabrik R; stereo or dual-mono C’s are hardwired to inputs 1 and 2 on the Konnekt. At 88.2 or 96kHz, you can pick either R or C. At 176.4 or 192kHz, effects and monitor mixing become unavailable, as all DSP muscle is running those high sample rates. In this case, you’d handle routing from your DAW.

A Konnekt 24D purchase also entitles you to download a special edition of TC’s Assimilator plug-in, which learns the EQ curve of anything you feed it, so you can apply those curves to your own tracks. Though the 24D must be attached for it to work, Assimilator runs on your host CPU, so it is accessible as a plug-in.

course see the inputs as mono audio bundles in DP. TC’s current CoreAudio driver uses generic input names — I had to remember that “Konnekt 5” in DP’s mixer was really ADAT channel 1 on the box, for example. The Windows XP ASIO driver has full descriptive names, so hopefully these aren’t far behind for the Mac.

I set mic gains using both 24D and Digimax gain knobs. Since the software faders for the 24D’s line inputs are for monitor mixing and don’t affect level-to-DAW, I trimmed my keyboard mix with the main output knob of my Mackie 1202VLZ mixer, which fed 24D ins 3 and 4. I then tweaked my monitor mix from the front panel — click on the light-ring icon in any channel strip in TC’s console window to make the 24D’s LED-encircled endless knob control the monitor level of that channel. Now it was time to play, and impossible for me to babysit the rig. The resulting recording had no dropouts, clock-related noise, or other gremlins. I returned to the studio delighted with the quality of the raw materials I now had for mixing a demo, especially the vocals. This speaks to the headroom and “sweet spot” of TC’s pres, as both singers belt out quite a wide dynamic range.

VITAL STATS

SYSTEM REQUIREMENTS

256MB RAM; 1GHz or faster G4, G5, or Intel processor, OS X 10.4 or later (Mac); Pentium 4 1.6GHz or faster, Windows XP (PC).

ANALOG INPUT CHANNELS

4.

PHYSICAL ANALOG INPUTS

2 XLR combo jacks (mic/hi-Z) w/ phantom power, 4 1/4" TRS balanced.

ANALOG OUTPUTS

4 1/4" TRS balanced, 2 1/4" stereo headphone outs.

DIGITAL AUDIO I/O

8-channel ADAT lightpipe, or 6-channel ADAT plus stereo S/PDIF (coaxial or optical), or stereo coaxial S/PDIF plus stereo optical S/PDIF.

MIDI CONNECTORS

In, out.

AUDIO RESOLUTION

24-bit, 44.1–192kHz.

INCLUDED EFFECTS

Fabrik C channel strip and Fabrik R reverb (DSP-based), Assimilator EQ (host-based).

POWER SUPPLY

Bus power or 12V DC adaptor (included).

I’d heard from Mac users about unreliable MIDI transmission with an initial 24D driver version, so I’m glad to report that with the latest drivers and firmware I could download at press time, its MIDI ports worked fine. Its output deserves props, too: Whether I was hearing a multitrack session, or just CDs via the S/PDIF output of my ancient player, the overall sense of sounds being in three-dimensional space was on par with what I’d expect from a dedicated D/A converter. I found myself able to hear more detail at lower levels, which I’ll attribute to that analog volume control.

CONCLUSIONS

Given the 24D’s form factor, comparisons to MOTU’s UltraLite are inevitable. The MOTU has a more abuse-worthy build, a full eight channels of analog I/O, and coaxial S/PDIF, but no optical ports. Its CueMix software can do similar routing setups, and its LCD display offers more info about what’s going on in stand-alone mode. The TC stands out for two main reasons. First, its sound quality is truly audiophile-grade, leapfrogging any interface in this price neighborhood and many that live up the hill, including a couple of my favorite workhorses, the Digi 002 and Mackie Onyx 400F. Second, the Fabrik and Assimilator effects aren’t just killer, they were previously available only for the PowerCore, and all three would have cost you a cool grand list, plus the PowerCore hardware. This pushes the Konnekt into that zone of breaking — no, changing — the price-performance rules that we call Key Buy territory.

Stephen Fortner finds himself playing keyboards with one hand and manning the recording gear with the other far too often. He’s a glutton for punishment.