



Crowson Technology TES 100 Tactile Effects System

A Whole Lotta Shakin' Goin' On

Jeffrey Kern

A Brief History Of The Crowson Technology Universe

Crowson Technology, LLC is a California-based technology development company dedicated to developing cutting-edge, high-quality home entertainment products. The company was founded in 2001 by Randolph J. Crowson, and with the release of the TES 100 Tactile Effects System, is quickly becoming a leader in creative home theatre/audio electronics. Since its inception in 2001, Crowson Technology spent the better part of two years conducting research and development for the TES 100 Tactile Effects System, which was finally released in October 2003. The TES 100 is the only product of its kind built with patent-pending Linear-Direct-Drive™ technology, which dramatically connects you with the on-screen action. The TES 100 is also the only technology able to reproduce ultra-low (1 to 40 Hz) frequencies with significant and accurate tactile effect. The TES 100 Tactile Effects System and its companion A200 TES Stereo Amplifier is currently the only product the company offers.

"The degree of movement on-screen is seemingly reproduced to perfection by the Crowson Technology TES 100 Tactile Effects System."

Components, Connections, And Installation

The Crowson Technology TES 100 Tactile Effects System was pretty easy to set up and install. The Couch Kit and the Chair Kit are currently the only two options with the TES 100 system. The Couch Kit includes two TES 100 Transducers and two Vibration Isolators. The Chair Kit includes one TES 100 Transducer and three Vibration Isolators. Because I didn't have an outboard stereo amplifier, I used the Crowson Technology A200 Stereo Amplifier as a bridge between my Yamaha DSP-A1 integrated amplifier and my subwoofer and the individual TES 100 Transducers. To install the TES 100 system, all you do is attach a splitter to the subwoofer out cable on the back of your receiver or integrated amplifier so one



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Each TES 100 Transducer:

Electromagnetic Actuator
Dimensions (HWD In Inches): 1.1 x 4.8 x 5.7
Weight (In Pounds): 3.5
Binding Posts Accept: 18 To 10 AWG Loudspeaker Wire
Nominal Impedance: 6 Ohms
Overload Protection Circuit Trip Temperature: 180-Degrees Fahrenheit
Minimum Power Recommended: 50 Watts RMS
Maximum Power Recommended: 500 Watts RMS
Maximum Load: 1,000 Pounds Per Kit
Frequency Response: 1 Hz To 500 Hz

Each Vibration Isolator:

Made Of Mark-Free Rubber, To Isolate The Tactile Sensation From The Chair Or Sofa To The Floor

The A200 Crowson TES Stereo Amplifier (Optional \$349):

Dimensions (HWD In Inches): 3.5 x 19 x 7.5
Weight (In Pounds): 12
Power: 100 Watts Into 4 Ohms (85 Watts Into 6 Ohms)
Outputs: Dual Stereo Outputs To Each TES100 Transducer
Low Pass Filter: 200 Hz
Price:
\$349 For The TES 100 Chair Kit—Which Includes One TES 100 Transducer And Two Vibration Isolators
\$649 For The TES 100 Couch Kit—Which Includes Two TES 100 Transducers And Two Vibration Isolators

Manufactured In The U.S.A. By:

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cable goes to the Subwoofer In on the back of your subwoofer, and the other cable (via the splitter or RCA Y Adapter) goes to the Crowson Tech A200 Stereo Amplifier. If you have a stereo amplifier at your disposal, instead of connecting the line to the A200 Stereo Amplifier, you would connect it to your own stereo amplifier. From the A200 or your stereo amplifier, you would then connect, via regular loudspeaker wire, the stereo amplifier to the individual TES 100 Transducers. Each transducer has dual binding posts for the positive and negative loudspeaker wire connections. Two transducers should be placed under the back feet of the couch (if you're using a



C O N N E C T O R S



Couch Kit), or one transducer under one of the back feet of the chair you're sitting on. As I will explain later in my "Performance Critique" section, I actually had the opportunity to use two TES 100 Transducers for a Chair Kit, instead of the one that is usually included in the Chair Kit package. Loudspeaker cables aren't included with the TES 100 system, so I used the most basic Monster Cable loudspeaker cables I had on hand.

Linear-Direct-Drive Tactile Technology

The Crowson Tech TES 100 Tactile Transducer System is the first tactile product to use this patent-pending method of transferring energy to home theatre seating. At frequencies between 1 and 500 Hz, humans "feel" sound instead of, and in addition to, just "hearing" sound. What Linear-Direct-Drive Technology does is that it incorporates a proprietary "electromagnetic short throw linear actuator" where the transfer of motion is direct and the excursion required for the actuator to create tactile effects is very small. In other words, because nothing stands between the motion of the TES 100 and your furniture, the excursions required are miniscule. Hence, the TES 100's ability to produce extremely quick and accurate motion is quite a dramatic improvement over simple "shaker devices."

Performance Critique

The TES 100 Tactile Transducer System is more than just a "shaker device." The electromagnetic actuator also rolls, rumbles, and precisely translates the audio coming from the amplifier into a tangible (e)motional experience. It's quite interesting to think that

the movement and effect the TES 100 produces can have dynamic range, but the TES 100 system has just that. In *U-571*, when the depth charges go off all around the submarine, there is a spatial sense of three-dimensionality in how the explosions rocked me in my chair. Of course, my chair reverberated much more with the louder on-screen explosions, but the smaller explosions are felt in perfect relation to their effect on-screen: smaller. Still very effective mind you, but smaller. During the opening sequence of *The Lord Of The Rings: The Two Towers*, when Gandalf is fighting the Balrog as they rapidly plummet down to the lake bed deep within the mountainous caverns, the TES 100 grumbles, rolls, and reacts in exact accordance with the physical action on-screen. This is yet another perceived benefit of Crowson Technology's TES 100 Tactile Effects System. Although the TES 100's performance is based solely on the amount of audio information in each scene, it performs so well that it is very easy to confuse how well the system shakes you in your chair when you compare this performance to what you see on-screen. In *Kill Bill, Vol. 1* the gentle pop of a decapitated head hitting a conference table resonated as a pop within my chair. When the climactic sword fight occurs between The Bride, O'Ren, and the Crazy 88s, the TES 100 responded by physically placing me in a convincing manner inside the movie fighting beside Uma Thurman. In *The Lord Of The Rings: Return Of The King*, during The Battle Of Pelennor Fields throughout Chapters 28 through 44, the TES 100 system really impressed and shined as minute motion details—as well as the much more aggressive on-screen moments—were accurately reproduced by shaking my chair to the exact degree from that displayed in the film. The degree of movement onscreen

was seemingly reproduced to perfection by the Crowson Technology TES 100 Tactile Effects System.

In reviewing this product, I sort of had the best of both worlds. When I was originally going to review the TES 100 system, I had requested a TES 100 Couch Kit, which included two transducers and the 100 Watt (x 2) A200 Stereo Amplifier, instead of the TES 100 Chair Kit with just one transducer, along with the A200 Amplifier. I didn't have a stereo amplifier, so I used the A200 Stereo Amplifier from Crowson Technology. As I moved from my apartment to my house, I switched out the sofa and implemented a chair in my home theatre. What this meant was that I now had two transducers at my disposal for my chair, instead of the usual one, which comes in the Chair Kit. I am glad it worked out this way because having a chair with two transducers is most excellent! Hooking up the two transducers to a chair instead of two transducers for a couch makes a world of difference. When I started reviewing the TES 100 system with a couch, the shaking was definitely there and was pretty effective. The sense that I was feeling the soundtrack more was very apparent. The experience was definitely an enjoyable one. The impact of having your chair hooked up with dual transducers was like taking a veil off the shaking effectiveness. I felt more of the involvement the system offers in my home theatre chair than I ever did with the couch. Make no mistake, the couch experience was great, but having two transducers to shake my chair was a genuinely wonderful—and more importantly—an incredibly more immersive experience.

Conclusions

Certainly, a great subwoofer can effectively rumble inside of your gut during some very intense LFE channel activity. The Crowson Technology TES 100 Tactile Effects System takes this an extra step (or two) further by transporting you emotionally further into what you are watching by physically altering significant perceptions of what a home theatre experience is meant to be. At the end of the day, all a home theatre enthusiast and aficionado wants to be is fully immersed into the complete home theatre experience. The TES 100 Tactile Effects System from Crowson Technology does just that by providing an extra dimension of immersion, not really seen or heard, but actually felt. No longer is someone just watching a movie anymore; with the advent of the TES 100 system, those who love home theatre can be placed very effectively within the experience. ■