

## ZOOM

The TTE's audio section features handwired circuitry, chassis-mounted tube sockets, and a rugged, PC-board mounting system for the controls.

## FULLTONE TUBE TAPE ECHO

TESTED BY ART THOMPSON



Vintage tube-powered Echoplexes have long been favored for their warm delay sounds, but players determined to use these old machines have their work cut out for them. Regular head cleaning and tape replacement are de rigeur for keeping Echoplexes sounding good, and the units also contain motors, belts, capstans, pinch rollers, and heads that wear out and have to be replaced or rebuilt to ensure reliable operation. Since no modern, tube-powered alternative to the Echoplex has been available, that has been the way it is—until now. Fulltone's new Tube Tape Echo completely changes the situation for fans of tape delay. Designed from the ground up to solve the noise and reliability issues that plague vintage tape echoes, the TTE sports a brushless DC servo motor for quiet, stable operation, a DC-powered cooling fan, a low-noise/EMF toroidal transformer, DC-powered tube filaments (for minimal hum), and proprietary Erase/Record and Playback heads

that Fulltone promises will “outlast you.” Other enhancements include Record Level and Echo Tone controls, stereo outputs, three distinct stereo operation modes, and a 2-position Tape Speed switch with internal range-adjustment trimmers.

### CONSTRUCTION

The U.S.-made TTE is built like a tank and features a birch-ply cabinet with neatly applied blonde Tolex covering, a nickel-plated steel chassis, and stainless-steel hardware. The quality extends to the interior, as well, with handwired audio circuitry and chassis-mounted ceramic tube sockets. The TTE's controls and switches are mounted to a small PC board, which is rigidly supported by metal standoffs on each end, and further reinforced against flex via steel bushings that surround the shaft of each pot. The jacks, on/off switch and AC receptacle, transformer, cooling fan, and drive motor are mounted directly to the chassis, and the power supply, motor speed, and record/erase-circuit components are located on two

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**EDITORS' PICK AWARD**



## SPECS

- Two 12AX7s for record and playback
- One 12AU7 for bias-oscillator erase function
- Provides up to 15dB of tube boost
- Dual-speed operation: 40ms-1,300ms (Low Speed); 20ms-650ms (High Speed)
- Dual outputs
- 3-position Stereo Mode switch
- Bypass switch
- Echo on/off footswitch jack
- Guitar Volume, Record Level, Echo Repeats, and Echo Tone controls
- Baltic birch-ply cabinet with Tolex covering

separate PC boards. The audio resistors and caps are handwired to a phenolic board, which, along with the tube sockets, are connected via hand-soldered flying leads.

The TTE comes with a padded Cordura nylon case that features wood reinforced sides, a generous compartment for stashing cords and spare tape cartridges, and a shoulder strap. Old EP-2 Echoplexes had a built-in storage compartment, but by eliminating this feature and incorporating a motor that's one-fourth the size of the AC-powered mill found in the Echoplex, Fulltone was able to keep the TTE at a compact 11" x 8½" x 6".

The plastic ETC-1 tape cartridge (\$29.95 retail) is made by Fulltone, and it comes loaded with studio-quality mastering tape. Replacing the tape cartridge (which should only have to be done every few months) is easy to do by referring to the tape-path diagram provided in the manual (a DVD manual is also available).

## CONTROLS

With its separate Guitar Volume and Echo Volume controls, the TTE is similar to the

original EP-1 Echoplex (the later model EP-2 had an Instrument/Echo mix knob). The TTE also mirrors the Echoplex in its use of a spring-loaded transport clutch lever that you slide to the right to engage the pinch roller and drive pinion, thus starting the tape in motion. The lever is held in "drive" position by the plug of the cord that feeds your amp. Unlike the Echoplex, however, the TTE sports an extra output jack and a 3-position Stereo Mode switch, which, when using both outputs, gives you the following choices:

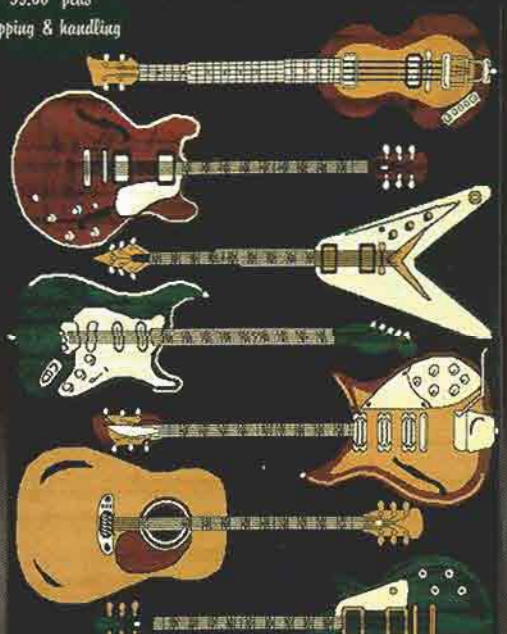
- Guitar-plus-echo in Left and Right outputs.
- Guitar-plus-echo in Right output; Guitar only in Left output.
- Guitar in Left output; Echo in Right output.

Obviously, you don't have to use the TTE in stereo, but this hip feature adds a great deal of flexibility over the venerable Echoplex.

## OPERATION

For such a complicated piece of machinery, the TTE is easy to use. After plugging your

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## Thanks for the compliments, Eric Clapton & John Mayer

"I've kind of mucked around with that AdrenaLinn – the Roger Linn piece. I think that's a fabulous piece of equipment...it's got some great sounds."

– **Eric Clapton** from *Vintage Guitar* magazine, June 2004

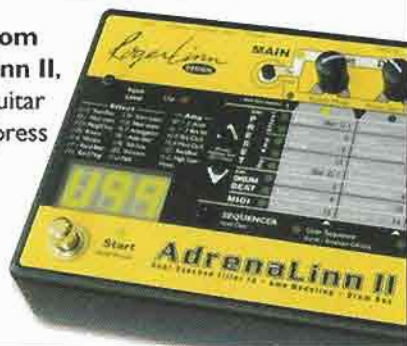
"I started messing around with the AdrenaLinn and very soon found this combination of the beat and the arpeggiator. I've never heard a guitar do that before. I just stayed there in that room for like two or three hours...I remember thinking to myself, this is really strong, this really makes me feel good."

– **John Mayer** from UK's *Guitarist* magazine, November 2003, on using AdrenaLinn to record his hit "Bigger Than My Body"

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guitar into the unit, turning on the juice, and waiting a minute or so for the tubes to warm up, you simply slide the transport clutch lever to the right to start the tape rolling, run a cord from your amp into the Main Output jack, and you're ready to rock. This mono setup requires that the Stereo Mode switch be set in either position 1 or 2, otherwise you'll hear *only* echo and none of your straight guitar sound. By comparing the straight and processed signals using the Bypass switch, you can adjust the Guitar Volume knob to provide a mild boost when the effect is active, which keeps the delay sound fat and strong—particularly when driving long lengths of cable and/or using additional effects. A Record Level trimmer lets you adjust the strength of the signal being printed to the tape (settings of three o'clock or higher are recommended to ensure a robust echo with a good signal-to-noise ratio), while the Echo Volume and Echo Repeats knob let you adjust both the

volume *and* number of repeats in the echo signal.

An Echo Tone trimmer lets you EQ the repeats to taste, and a Playback & Echo Off jack allows use of a single-button footswitch (not included) to turn the echo on and off. By using a two-button footswitch, you can also disengage the erase head to put the TTE in a sound-on-sound mode. This allows you to record a rhythm loop, or layer parts ad nauseam to create outlandish sonic tapestries.

In classic tape echo fashion, setting the delay time on the TTE is done by moving the playback head (via the top-mounted slider) closer or farther away from the record head for shorter or longer echoes, respectively. You can also adjust delay time via the Tape Speed switch. The High Speed setting yields the most in-tune sounding repeats, optimum frequency response, and lowest noise, while Low Speed operation makes the repeats sound grungier and

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more chorused—cool if you're after a vintage-style lo-fi echo sound.

### SOUNDS

The TTE delivers extremely rich-sounding delay textures that stand out from your straight guitar signal in ways you probably can't fully appreciate unless you're familiar with tape delays. All the reasons why cats like Slash, Prince, and Tom Petty record to tape are highlighted on a micro level by the TTE, as its delay

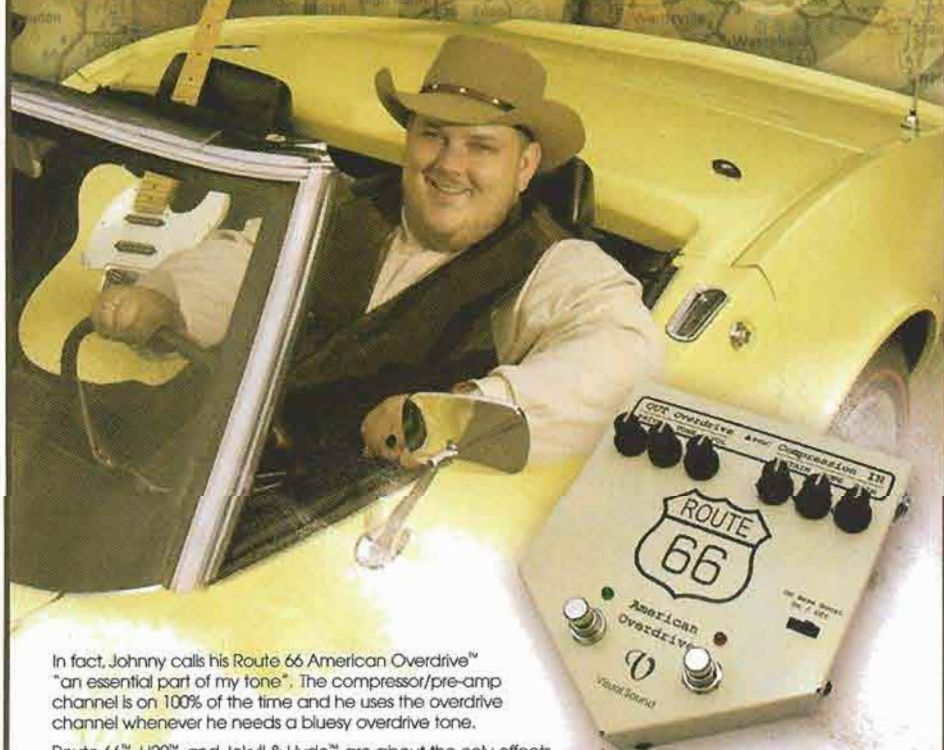
sounds are noticeably more vibey and organic than anything delivered by bucket-brigade or digital pedals. Properly set up, the TTE is amazingly quiet. In fact, with the Record Level trimmer set as specified in the manual, and the Echo Volume at about nine o'clock (higher settings increase noise), the only audible noise is the whirr of the tape.

Not surprisingly, as great as the TTE sounds in mono, it sounds even better in stereo. Feeding a 50-watt Marshall and a Fender Twin Reverb, the TTE's long delays sounded lush and hugely dimensional—particularly with the Stereo Mode switch set to position 2. And if you're into rockabilly-style slapback echo, taking a cue from the manual and using position 3 (one amp wet, the other dry) makes the effect sound so juicy and reverberant you'll be finding ways to work country licks into whatever you play. For spacey textures, simply turn the Echo Repeats knob to three o'clock or higher—the point at which the repeats start cascading into infinity—and pull the Delay Time slider back and forth to its stops to create classic ray gun/rocket ship effects. It's worth noting that even when the delay is off, the TTE's tube circuitry adds richness and vibe (and up to 15dB of boost) to your guitar sound. Fulltone could have omitted the Bypass switch, and I doubt many players would have minded one bit.

### TTE-ERIFFIC

Fulltone owner Michael Fuller poured lots of money (reportedly more than \$275,000) and, along with his tech, Kiyoshi Sasaki, a huge amount of R&D into producing the TTE, which is certainly the hippest tube echo currently available. Sure it's cool to own a vintage Echoplex, but maintaining a 40-plus-year-old tube unit isn't easy, and, if you plan on touring with one, you'd better have your tech chops together or bring along someone who does. The TTE's superior drive system (which has now been improved with a ball-bearing corner roller), higher-quality heads, quieter electronics, and more flexible controls make it the obvious choice for hard-working pros—just ask Brian Setzer, a longtime Roland Space Echo user who recently switched to the TTE. Bottom line: The Tube Tape Echo is one of the most thoroughly satisfying old-school effects I've heard, and it wins an Editors' Pick Award. **E**

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