

ary 1968 "Comeback Special" on NBC TV (originally entitled "Elvis, Starring Elvis Presley"), where it can be heard, and occasionally seen, behind Moore's right leg during the seated/in-the-round performances.

Like some tube-fired chain reaction worthy of the Old Testament, Moore's purchase and use of this EchoSonic – serial number 8 (though often reported as being the third one built) – continued to send waves of desire for the new sound rippling through the Nashville scene. Chet's playing begat Scotty's desire, Scotty's playing begat Luther's desire, and Carl's desire, and Roy's desire... In time, Butts' work naturally begat a little desire on the part of the industry, too, and the design of the tape-echo unit mounted in the bottom of the combo cab was eventually adapted for use in the short-lived Rickenbacker Ek-O-Sound amp, and the far-longer-lived Maestro Echoplex. Another Butts design also brought Gretsch a humbucking pickup, the Filter'Tron, that nearly beat out Gibson at the patent office, developed after Chet Atkins' request for a pickup that produced less bass than the DeArmond Model 200, while also canceling hum.

As reported by Deke Dickerson, the current owner of number 24, these amps aren't short of quirks. The delay time of the slapback echo is fixed, and is longer than the current concept of "rockabilly slapback" (and longer still when you first switch on the amp, until its capstan motor has warmed up for five to 10 minutes), but, says Dickerson, "That is the EchoSonic sound." As for the amplifier itself, it is also something of a one-trick pony, and doesn't have much punch even for a 25-watter (by the time of Moore's first amp Butts had changed from 6V6s to 6L6s), but that too is part of the mystique. "These amps have a magic sound," Dickerson declares. "They are not very loud, and they break up really easily, and it really only does one thing with the non-adjustable echo. In that regard, it's not a very versatile amp at all. But the one thing that it does has not been captured by any other amplifier before or since. Nothing has that sound but an EchoSonic! The amp still works great today and has that awesome 'Scotty Moore sound'."

Ideally sized for the recording studio, the EchoSonic was woefully small for live use – its *raison d'être* – even by the time rock and roll graduated from sock hop to theater stage. To that end, even before Fender designed the whopping "high-powered" Twin of '58, and long, long before Vox and Marshall upped the ante on the AC100 and Super Lead, respectively, to help The Beatles and The Who and other Brits overcome similar difficulties, Butts created a pair of powered 50-watt "satellite" cabs to enable Moore's lithe rockabilly riffs to be heard on a stage in front of thousands of screaming Elvis fans. Otherwise, this 25-watt combo with a single 12" speaker and its built-in echo is a quaint reminder of a time when rebellion – and groundbreaking tone – came packed in a cabinet the size of a traveling salesman's battered suitcase. **VG**



Frank Roy

New Lease on Life

THE SOUND OF ROCK GETS A BRUSH-UP

If restoring dusty, neglected old tube amps built more than half a century ago isn't challenging enough, restoring amps with delicate built-in tape-echo units, no fixed schematic, and quirky hand-wired "rat's nest" circuitry should drive any level-headed tech insane. Regardless, Frank Roy of Toronto, Ontario, says "Bring 'em on!"

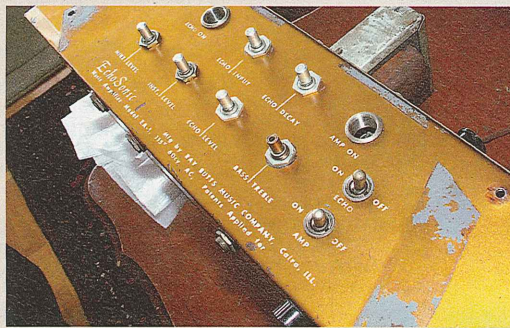
Roy, a trained IT professional – and Telecaster player – has been restoring vintage electronics since the late '80s. Lately, though, he has made a specialty of bringing rare and highly valued Ray Butts EchoSonic amplifiers back to life, both electronically and cosmetically.

"Ray was a genius of our time," Roy enthuses. "He helped pioneer the sound that eventually led to the next 50 years of mainstream rock music." History maker or not, Butts' amplifiers offer plenty to drive the less well-grounded repairman batty. "The amps run very hot, so tube failures are somewhat common, and some power transformers have failed...

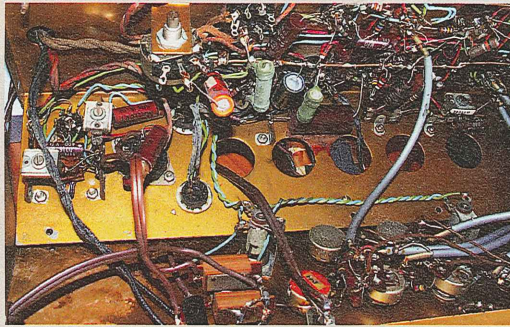
[and] the tape transport needs constant maintenance. The motor bearings and wheels need to be oiled, the tape loop needs to be replaced regularly, and the tape heads and contact points need to be demagnetized from having been in contact with the magnetic tape. As well, the pinch rollers and idler wheels almost always need to be replaced as the rubber hardens and develops

wear over time..." In other words, he has his hand full!

To compound matters, however, learning the art of EchoSonic restoration isn't simply a matter of boning up on Butts' design – or, the question would be, which design? "Each EchoSonic is almost unique, as Ray would often work with the customer to achieve, if desired, a specific sound," says Roy. "Over



The control panel of this EchoSonic chassis cleaned up beautifully once it was out of the cabinet, with the knobs removed.



To the uninitiated, Ray Butts' circuit may appear a veritable rat's nest, but it is solidly wired, with high-quality components.



Ten of the 11 tubes in the EchoSonic, on the crowded underside of the chassis, alongside two multi-section capacitor cans and a large power transformer.

time, we see alterations such as slight variations in some component values, changes in transformer orientation, tape-head mounting modifications, adjustments to the tape head circuitry... But [EchoSonic amps] are exceedingly rare, as only a dozen or so of them still exist today from the 68 ever built, and I have not seen them all."

Despite being a seemingly simple amplifier based around a pair of 6L6 output tubes (6V6s in some early models), Roy notes that the EchoSonic was never just a generic amp with a tape-echo tacked on, and there are several quirks to Butts' circuit. The chassis carries 11 tubes, six of which are dual-function, and the deceptively simple single tone control (marked "Bass|Treble"), rather than being the passive treble-bleed network familiar from most early amps, taps an interactive Baxandall-style tone stack that genuinely emphasizes bass when turned left, and treble when turned right. The wiring itself is extremely meticulous, too, entirely point-to-point, and includes top-quality components throughout, though to the uninitiated it can look like a tangled web.

In addition to the amplifier circuitry, the EchoSonic's tape delay mechanism was a minor

electromechanical wonder of its day, though the application here does present its own difficulties.

"The practicality of having a magnetic tape echo device built into such a compact medium had inherent space limitations, which affects the device. Magnetic tape starts to degrade after a certain amount of use, and in the case of a tape loop, the smaller it is, the faster it wears out." Squeezing all this echo into such a small space required a short loop, and therefore, frequent tape changes.

So, such thorough detailing and repair of an ailing EchoSonic constitutes plenty of hassle just to get a dusty old tube-powered suitcase rolling again – but look at it as breathing new life into the original sound of rock and roll, and it is clearly worth the effort.

– Dave Hunter

Photos courtesy of Frank Roy.