



VINTAGE SYNTHS

MARK VAIL

THE EMS VCS3 & SYNTHI A/AKS

VITAL STATISTICS:

Produced: 1969 to present (out of production for a short time in 1980).

Total Number Made: VCS3, estimated 550; Synthi A/AKS, 850.

Manufacturer: EMS (Electronic Music Studios), Treadal Veon Barn, Ladock, Truro, Cornwall TR2 4NW, United Kingdom. Phone 44-726-883-265. Owned by Peter Zinovieff from 1969 to 1979. Datanomics took over until 1983, when current owner Edward Williams stepped in.

Current U.S. Contact: Don Hassler, 1055 Lancashire Ct., Stone Mountain, GA 30083. (404) 292-4888.

U.S. EMS Servicing: Everett Hofner, EMSA [Electronic Music Studio, America], 11 North Main St., Williamsburg, MA 01096. (413) 268-3588.

Description: First commercially manufactured portable analog synthesizers (electronically identical), conceived by designer David Cockerell and avant-garde composers Tristram Cary and Peter Zinovieff. VCS3 comes in an L-shaped hardwood cabinet for tabletop use; measures 43 x 44 x 42cm (roughly 16-3/4" x 17-1/4" x 16-1/2"); weighs 9kg (almost 20 lbs.). Synthi A is in a black ABS briefcase for portability; measures 48 x 38

x 12cm (roughly 18-3/4" x 14-3/4" x 4-3/4"); weighs 7.5kg (about 16-1/2 lbs.).

Features: Two audio oscillators (0.5Hz to 20kHz, one with sawtooth and variable-shape sine waveforms, the other with variable pulse-width square and rising- or falling-ramp triangle waveforms), an LFO (0.025Hz to 500Hz, variable pulse-width square and rising- or falling-ramp triangle waveforms), noise generator, lowpass filter (18dB/octave, variable resonance, 5Hz to 15kHz, sine-wave oscillation), ring modulator, envelope shaper, dual-spring reverb, joystick controller, signal level/control voltage meter, dual input channels (1/4" mono, mike, line, and CV levels), two outputs (1/4" mono, via VCAAs for audio or pre-VCA for CV), headphone and scope outputs. Built-in stereo amplification/speaker system. Optional 3-octave duophonic DK2 mechanical keyboard with internal oscillator and velocity-sensitive dynamics, and 2-1/2-octave KS capacitive touch-plate keyboard and 256-event monophonic digital sequencer (fits inside Synthi A's lid, resulting in the AKS).

Insider Information: The VCS3 is better known in the U.S. as the "Putney," perhaps due to EMS's original address in Putney, a suburb of London. David Cockerell now works for Akai; he designed the hardware used in Akai's S1000 and S1100 samplers. Tristram Cary is a Professor of Electronic Music at Adelaide University in Australia. Composer Peter Zinovieff was taking "holiday" on a remote Scottish isle and was incommunicado during our research. Current EMS owner Edward Williams, a contemporary classical and electronic music composer, is perhaps best known for scoring music for television broadcast. Among his projects is the long-running nature series *Life on Earth*, narrated by David Attenborough.

Original Retail Price: VCS3, £330 (about \$825). Synthi A, £198 (about \$495). AKS, £420 (about \$1,050). [U.S. dollar to British-pound exchange rate in 1971 was 2-1/2 to 1.]

Current Retail Price: New: VCS3, £1,450 (about \$2,900). Synthi A, £1,375 (about \$2,750). AKS, £1,675 (about \$3,350). *Reconditioned:* VCS3, £850 (about \$1,700); Synthi A, £800 (about \$1,600); AKS, £988 (about \$1,975). [Current U.S. dollar to British-pound exchange rate is 2 to 1.]

Current Street Price: £250 to £500 (\$500 to \$1,000).

compared with its behemoth American counterparts. Instead of dozens of jacks spread across several square feet or more of front-panel space, the VCS3 offered a tiny, square patch-board matrix. Whereas American synth modules were connected together using handfuls of patch cables, small pins were inserted into the VCS3's patch board to route control and audio signals through the device. "There was actually a very good reason for using that patch board," explains David Cockerell, designer of the VCS3. "We got a good deal on them surplus. We got a few hundred of them pretty cheaply."

Since 1965, Cockerell had worked for Peter Zinovieff, who'd purchased a DEC (Digital Equipment Corporation) PDP-8, the first mini-computer, and put together one of the early computer music studios. According to Robin Wood, who joined EMS in 1970 and currently runs the company, "At least half of EMS was a very expensive computer studio where DEC computers were used to control prototype analog systems, not only for generating simple analog synthesizer sounds, but also for some very sophisticated filter bank systems that could analyze sounds. David Cockerell designed this 64-channel analyzing filter bank. It was a bit like a vocoder, only it was all under computer control. The company was heavily into this kind of advanced computer research."

"There was a group of three of us," Cockerell explains, "Peter Zinovieff, myself, and Tristram Cary. They were both into avant-garde music, what you would call serious music in the classical tradition. It was toneless, and they thought the keyboard was of secondary importance. The VCS3 wasn't really a keyboard instrument to start with. We sort of added the keyboard on as an afterthought." The keyboard in question was the DK2, a three-octave, duophonic mechanical affair installed with control electronics in a wooden cabinet that matched the VCS3.

Portability was an afterthought as well. "The VCS3 was pretty awkward to carry around," Cockerell asserts. "It would have to be in a box as big as a tea chest. It didn't fold over or anything." By 1971, Cockerell had squeezed his VCS3 electronics into an oversized briefcase, and the Synthi A was born. He also designed the KS, a 2-1/2-octave touch-plate keyboard with a 256-event monophonic digital sequencer.

Though he cherishes his old friend the Minimoog, assistant editor Mark Vail often wished it would fit in a briefcase like the EMS AKS. Then again, noting that Moog-packed Anvil case helped him build arm character.



EBET ROBERTS

Although Brian Eno fingers his Minimoog in this photo (very similar to the July '81 Keyboard cover photo), the EMS AKS in the background was also dear to his heart. At that time, Eno told us about an interesting quirk that the AKS had developed: "If I feed a loud input signal into the ring modulator it will trigger the envelope. . . It's very useful, because then you can use the envelope to trigger any other function in the synthesizer. . . When I get it serviced I have to put little notes all over the thing saying "Don't service this part. Don't change this.""

WHILE MOST OF THE SYNTHESIS ATTENTION in the late '60s here in the United States was focused on the creations of Bob Moog and Don Buchla (and soon thereafter, those from ARP), there was only one ballgame to follow in Europe. Out of an advanced—for 1969—computer-music studio in London came a tabletop modular synthesizer known here in the States as the Putney.

Developed and marketed by EMS, the VCS3—its true name, which stood for the voltage-controlled studio, attempt #3—was tiny

