Emax SE

Featuring Spectrum Interpolation Digital Synthesis

The new Emax SE: Synthesis Enhanced. At last, a sampler that combines the realism of sampled sounds with the creative power of digital synthesis. The SE introduces a new form of user-friendly additive synthesis called Spectrum Interpolation Synthesis. The new Emax SE also features true Digital Signal Processing capabilities, including Digital Sample Rate Conversion, Digital Pitch Conversion, and Transform Multiplication™. Other new features include Preset Stack Mode and CD-ROM interface capabilities.

● Spectrum Synthesis

Traditionally, creating useful sounds with additive synthesis meant tedious programming for the musician. The Emax SE features Spectrum Synthesis - a new process that allows the musician to work with harmonic building blocks, or Spectra. A Spectrum consists of 24 harmonics, each with its own level and pitch ratio relative to fundamental frequency.

Spectrum Synthesis allows the user to select up to 24 of the 99 preset Spectra (or define your own) and place them at any of 24 Time Slice locations. The Emax will then interpolate (crossfade) between those Spectra (using the *Synthesize!* function) to produce a time varying timbre. Alternatively, a timbre may be created in the traditional way by specifying amplitude and pitch contours for each individual harmonic.

Each Emax SE voice can consist of two synthesized timbres, a timbre and a sampled sound, or two sampled sounds. The resulting voice can then be processed using the Emax's extensive Analog Processing features and then placed anywhere in the stereo spectrum.

● Digital Signal Processing

Through Digital Signal Processing, the Emax SE offers the user even more new power. **Digital Pitch Conversion** alters the original pitch of a sound, allowing the user to transpose the sound further up or down the keyboard than would be conventionally possible. Sounds can also be converted for splicing or combination with sounds at different pitches. **Digital Sample Rate Conversion** allows the user to maximize memory efficiency. While it is usually preferable to use the highest sample rate, it sacrifices memory. Digital sample rate conversion lets you change a previously recorded sample's rate to a lower, but sonically acceptable level, thereby conserving memory. **Transform Multiplication** is a sample by sample computation of two digital sounds which results in one new and unique sound.

● Preset Stack Mode

This new function allows the musician to stack up to 4 presets on each key of the keyboard for the creation of very fat, rich sounds.

● CD-ROM Interface

The new Emax SE includes software that allows the Emax to interface with Optical Media's CD-ROM. Their *Universe of Sounds* compact optical disc, *Emax Volume One*, contains 505 banks of sounds with over 4000 voices.

● Update

The Emax SE is available in update form for all Emax Keyboards and Rack Samplers, including the Hard Disk based Emax HD Keyboard and Rack. The SE Update includes a Spectrum Development Disk, Spectrum Synthesis Sound Disk, Digital Signal Processing Sound Disk and User's Guide.

Emax SE. The magic continues.