dream

New Virtual Tone-Wheel Organ

Library module for SAM5000 Series

DREAM has implemented a fully new Organ module, based on "Virtual Tone-Wheel" concept, simulating the real behavior of the 91 tone wheels of the legendary B3, which overcomes limitations from previous implementation:

- No more computed wavetables -> fast access to drawbar adjustments
- No polyphony limitation
- Fully new software implementation with low footprint on memory usage (no IDATA usage, no external RAM needed for computed waves etc.)
- Simulation of the real behavior of tone wheel organ, e.g. level scaling (keyboard curve per drawbar etc.), tuning of the tone wheels as in original, processing of artifacts as leakage, randomness on key clicks etc.

This new Organ module consumes only 3 DSPs on SAM5000 series IC (which provides DSP-Array with up to 16 DSPs overall).

Features

- full polyphony
- 3 channels for Upper manual, Lower manual and Bass Pedal
- 91 virtual tone wheel generators with phase synchronization
- realistic fold-back simulation
- adjustable leakage noise
- single triggered Percussion with adjustable Level and Decay
- realistic virtual Vibrato/Chorus Scanner effect included with adjustable Depth and Rate
- adjustable global tuning
- 48 KHz sampling rate (12.288 MHz quartz)
- Audio processing with 24 bit quality

Additional available Effects from DREAM Library

- Rotary Speaker Simulation
- Amp-Modeling, Distortion, Tube-Overdrive Simulation
- Reverb / Echo
- Phaser, Tremolo and many others