

Catch the new Sound with the French Infernal Machine



DHM 89 B2 stereo

The D.H.M. 89 B2 is a stereo audio computer, which allows :

Dual digital delay :

In quasi-stereo mode, two independent delays operate on the same sound from 1 ms to the maximum value.

In true stereo mode the two channels are completely separate.

The maximum value of delays depends upon selected bandwidth : 1200 ms for 5 KHz, 600 ms for 10 KHz, 300 ms for 20 KHz.

In option additive memories can upgrade delay up to 5000 ms. The D.H.M. 89 B2 offers an unique feature which allows a continuous variation of delay without doppler effect nor switching noises. So that it is possible to change delay during operation without audible effects.

Dual echo :

By association of dual delay and feedback.

Dual pitch shifting :

From - 2 to + 1 octave. Sophisticated micro-computer operates phase coincidence of joining points and eliminates « glitches ». The serial delay is adjustable.

Dual automatic arpeggio :

is a pitch-increasing or decreasing echo.

Dual reversed sound :

Electronic equivalent of a magnetic tape running reversed. Reversed sound itself can be pitch-shifted.

Dual memory latch-mode :

memorised sound can repeat indefinitely. The two borders of repeating sound are continuously selectable, as well as reading sense and pitch ratio.

Principal technical features :

- 16 bits flying comma A/D converter allowing a 95 dB dynamic range, without use of an analog compressor/expander technique.

- Distorsion : 0,1 % for delay mode, 0,2 % or pitch shifting mode.

- Memory capacity : 210.000 bits.

- Sample rate : 52,91 KHz (for 20 KHz bandwidth).

- 3 dB bandwidth : Selectable, 5, 10 or 20 KHz.

- Printed boards : Easily removeable for maintenance.

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Put any sort of Sound in memory and Tame it!



KB 2000

KB 2000 is an external programming unit for the audio computer DHM 89 B2. It includes a three octaves piano keyboard, and a control panel for setting the following functions :

Three voice chorus :

By adding to original sound two pitch shifted voices. The resulting chord is controlled by the keyfingers. A serial delay can be added, which is continuously adjustable.

Reverse synchronisation :

The reverse mode of DHM alone affects the original tempo in a random way. The «Reverse synchro» mode synchronises this effect with attacks of the sound, so that reversed sound has the same tempo as original. The added delay is adjustable.

Biphonic memory synthesizer :
Any existing sound, supplied by a tape recorded or by a

microphone, is memorised in DHM by simply depressing the «memory latch» button. The length of memorised sound is 1,2 s for DHM 89, 5000 ms for option. Then the KB 2000 synchronises memory reading with attacks of the notes. «Attack point» sets the part of the sound at which each note begins, «End point» and «Return point» select the part of memorised sound which is repeating continuously when the note is sustaining. This sustain can be very clean, for example on a bell resonance or a human voice vowel, by means of the internal phase tracking computer of DHM. «Speed» sets the reading speed of memorised sound. **Two envelope generators :**
Drive two VCA to control the envelope of the notes. They are adjustable in attack time, hold time and release time.

Dual evolving vibrato :

Three basic parameters : frequency, sharpness and depth are modulated function to time by a form generator initialised by attacks of the notes.

Glissando time :

From a note to the following note is adjustable.

Sustain mode :

Once a keyfinger is depressed, the note starts and continues, even when the key is released. The real duration of note depends upon settings of envelope generator.

Push-play mode :

The notes are heard only if the corresponding keyfingers are continuously depressed.

Trimmer :

Adjusts the fine tune of the whole keyboard. It is a general adjustment, the notes are always in a good ratio together by means of a digital generation.

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