

ERRATA

Clarence BARLOW (USA, 1945) – *Approximating Pi for 16 audio channels (7'37)*

Point of departure: the converging series $\pi = 4(1 - 1/3 + 1/5 - 1/7 + 1/9 \dots)$.

Each convergence gets a 5040-sample time window (twice the LCM of the numbers 1-10), in which ten square-wave partials of $8\frac{3}{4}n$ Hz (deriving from the 5040 samples) and amplitude 2^{d_n} are set up, 'n' being the partial number and 'd_n' the nth digit in the convergence's decimal representation; e.g. for '3.141592654', the amplitudes are $2^3, 2^1, 2^4, 2^1, 2^5, 2^9$ etc., thereafter rescaled by the factor $2\pi/n$, 'n' still being the partial number. The convergences stabilize the digits from left to right to a value approaching π , the resultant timbre moving from turbulence to constancy over $4 \times 10^9 \times 5040$ samples or $\sim 14\frac{1}{2}$ years. Here sixteen audio channels are transposed by sample-dropping from $8\frac{3}{4}$ " Hz to frequencies from 9 to 402 times higher

(= $[9 \times \pi^{(1+\frac{1}{2}+\frac{1}{3}+\dots+\frac{1}{\chi})}]$, where χ is the channel number plus one); the duration is truncated to $7' 37\frac{1}{7}$ ", the highest transposition thereby reaching the 1,608,000th approximation of π , where the first six digits are already stable.