

Blackstone-NEY Ultrasonics Patent Milestones

U.S. Pat. No. 4,736,130, The first adjustable parameter sweeping frequency ultrasound generator that allows selecting ultrasonic variables such as sweep rate and bandwidth for optimizing any specific ultrasound process. (Sweeping Frequency)

U.S. Pat. No. 4,743,789, The first electronic circuit that was commercially produced and sold as a sweeping frequency ultrasonic generator. (sweepSONIK)

U.S. Pat. No. 5,834,871, The first systems that reduce resonance damage to parts caused by frequency modulated ultrasound. (dualSWEEP)

U.S. Pat. No. 6,002,195, The first Langevin transducer used for generation of multiple ultrasonic frequencies. (Universal Transducer)

U.S. Pat. No. 6,016,821, Discloses a sweeping frequency waveform that acoustically improves contamination removal from an ultrasound tank. (upSWEEP)

U.S. Pat. No. 6,181,051 B1, Ultrasound systems that reduce amplitude modulated resonance damage. (CRAM)

U.S. Pat. No. 6,313,565 B1, Multiple frequency ultrasound systems. (multiSONIK)

U.S. Pat. No. 6,462,461 B1, Electronic circuitry that allows the practical and efficient design of multiple frequency ultrasound generators.

U.S. Pat. No. 6,538,360 B2, Multiple frequency ultrasound generators. (multiSONIK)

U.S. Pat. No. 7,019,439 B2, Seven frequency ultrasonic transducer. (Universal Transducer)

U.S. Pat. No. 7,336,019 B1, Concurrent ultrasound in series with multiple frequency ultrasound.

U.S. Pat. No. 7,629,726 B2, Electronic bridge circuitry for highly efficient ultrasound generators.

Note: Ultrasound is defined as sound above the range of human hearing, typically above 19 kHz ranging up to the megahertz range. The higher frequencies in this range are often referred to as megasonic.