

About the Perfect Pitch™ Algorithm

Hummingbird™ employs the Perfect Pitch™ pitch detection algorithm, which I developed over a period of many years. The algorithm is unparalleled in speed, accuracy, and robustness, does not require any special hardware, and automatically detects virtually all instruments (including voice) without any special setup.

As you can tell, I am very proud of this process. Pitch detection is a black art, known only to a handful of people. I will venture that my algorithm is the best of its kind.

Technical...

The Perfect Pitch™ algorithm can detect periodic waveforms from 60HZ to 4000HZ. It was developed on a standard Macintosh LC, and tested with waveforms generated by a Yamaha PSR-400 synthesizer. It is fast-- up to 44 determinations per second, and accurate-- 1% of an octave within 20 milliseconds (one cycle), 1/1200 of an octave (one cent) within 16 cycles. All tuning references are based on the 'Equal Tempered' scale, A=440 adjustable. A Math co-processor is NOT needed.

The algorithm was developed solely by Rustle Laidman, and is strictly proprietary, at this time. Interested parties please make enquiries.

- Limitations - Perfect Pitch™ can only detect one note at a time.