

- [54] **AUDIO DIGITAL RECORDING AND PLAYBACK SYSTEM**
- [75] Inventor: **David M. Schwartz, Denver, Colo.**
- [73] Assignee: **CompuSonics Corporation, Denver, Colo.**
- [*] Notice: The portion of the term of this patent subsequent to Sep. 18, 2001 has been disclaimed.
- [21] Appl. No.: **651,111**
- [22] Filed: **Sep. 17, 1984**

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Attorney, Agent, or Firm—Jerry W. Berkstreser

[57] **ABSTRACT**

A microcomputer system for converting an analog signal, such as an audio signal representative of sound into a digital form for storing in digital form in a highly condensed code and for reconstructing the analog signal from the coded digital form is disclosed. The system includes reductive analytic means where the original digital data stream is converted to a sequential series of frequency spectrograms, signal amplitude histograms and waveform code tables. Approximately 100 times less storage space than previously required for the storage of digitized audio signals of high fidelity quality is thereby obtained. Additive synthesis logic interprets the stored codes and recreates an output digital data stream for digital to analog conversion that is nearly identical to the original analog signal.

Related U.S. Application Data

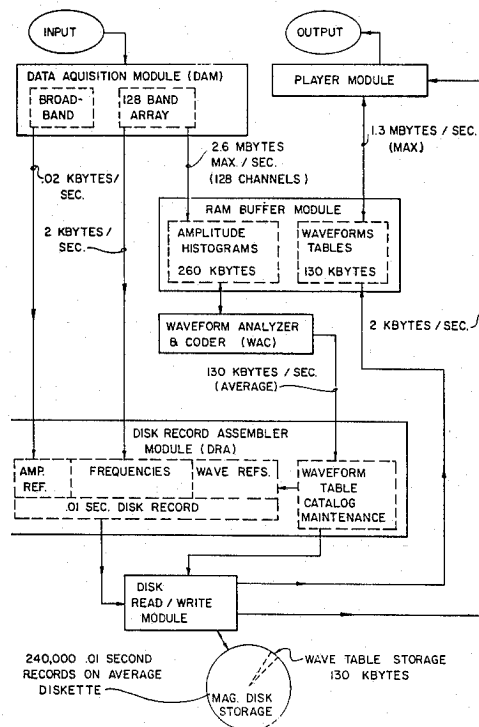
- [63] Continuation-in-part of Ser. No. 486,561, Apr. 19, 1983, Pat. No. 4,472,747.
- [51] Int. Cl.⁴ **G11B 5/00; G10L 5/02**
- [52] U.S. Cl. **360/32; 381/51**
- [58] Field of Search **381/51, 41; 360/32; 328/14**

References Cited

U.S. PATENT DOCUMENTS

4,164,020 8/1979 Griffith 364/718

26 Claims, 7 Drawing Figures



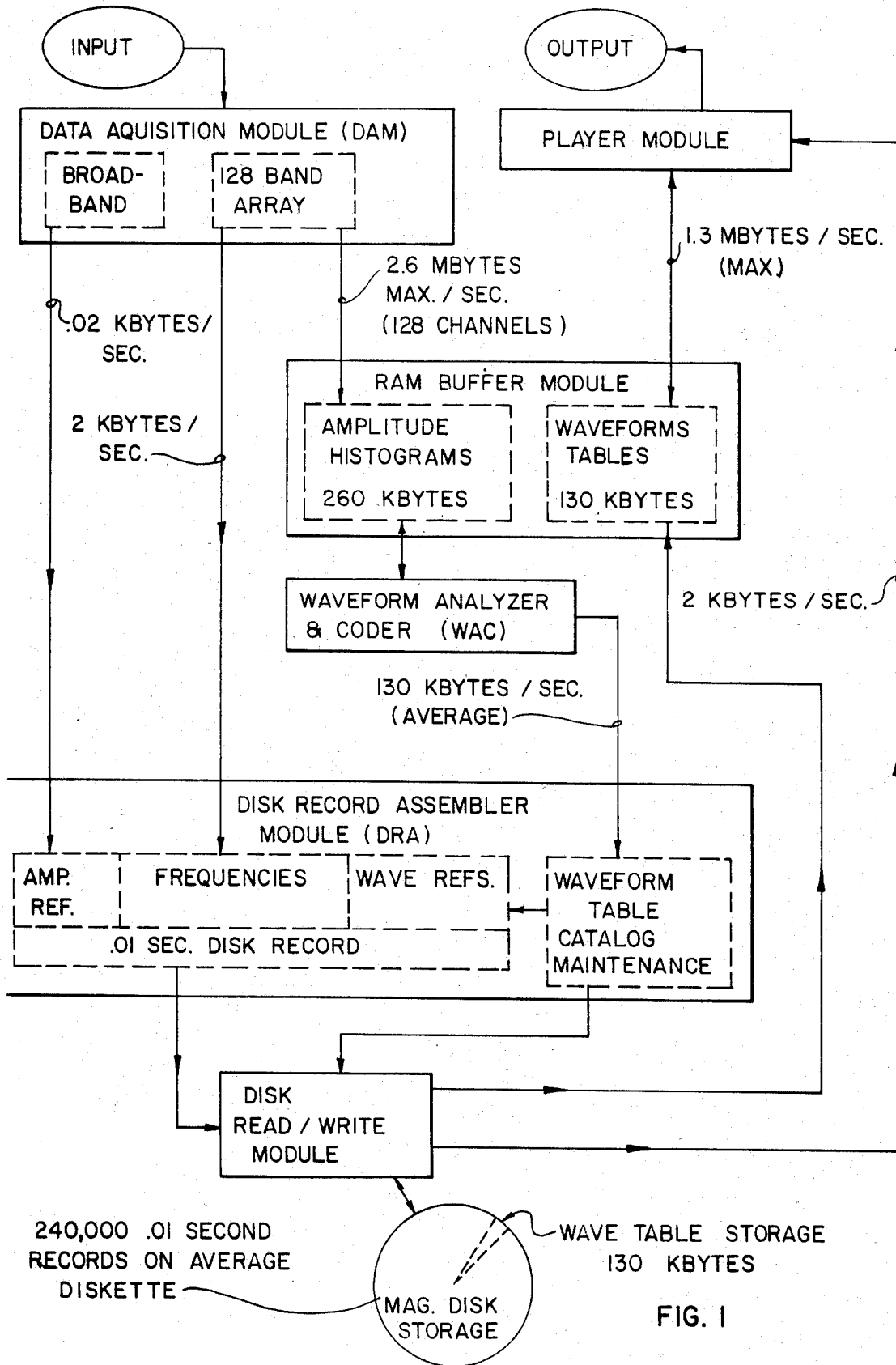


FIG. 1

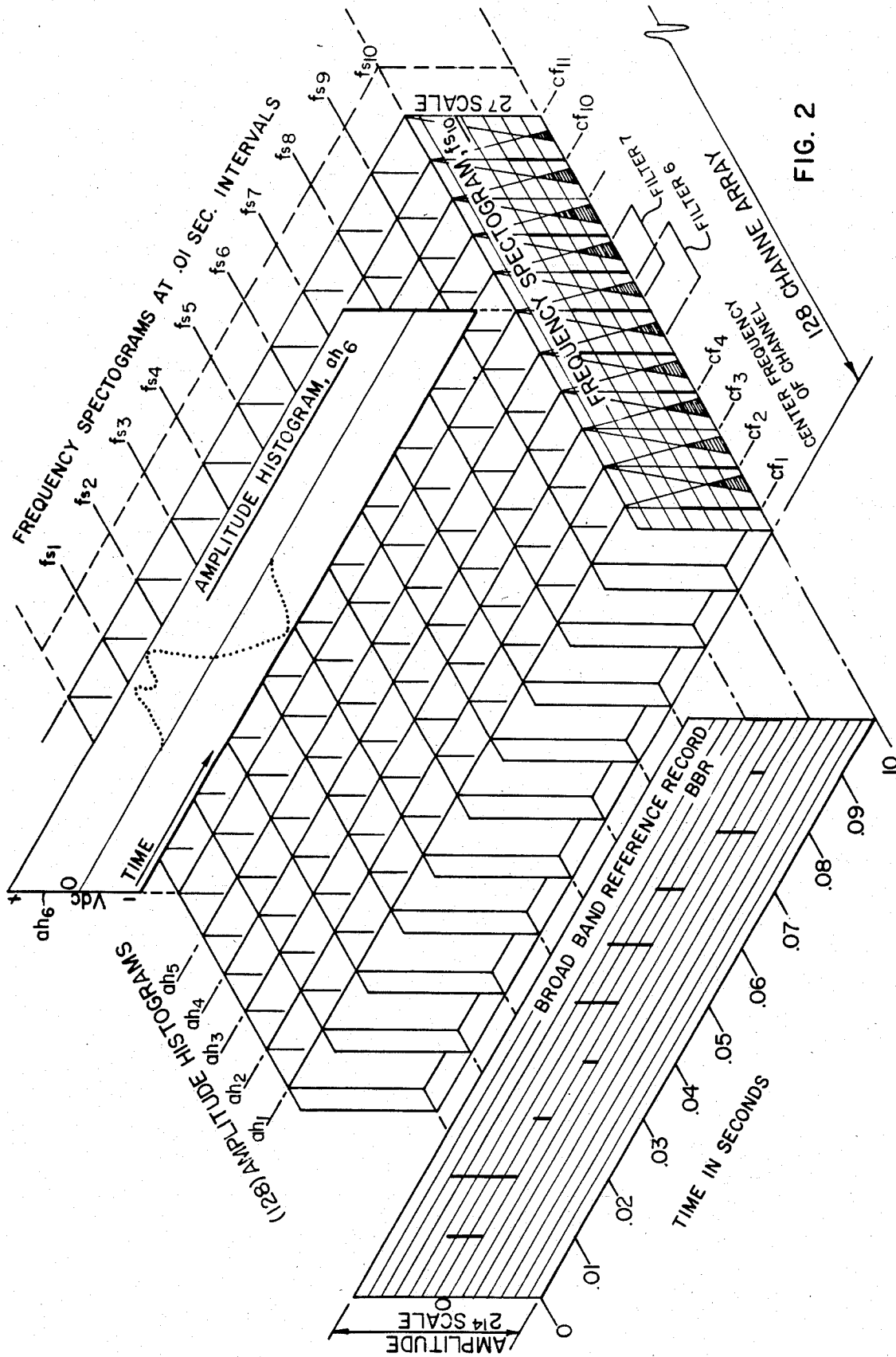


FIG. 2

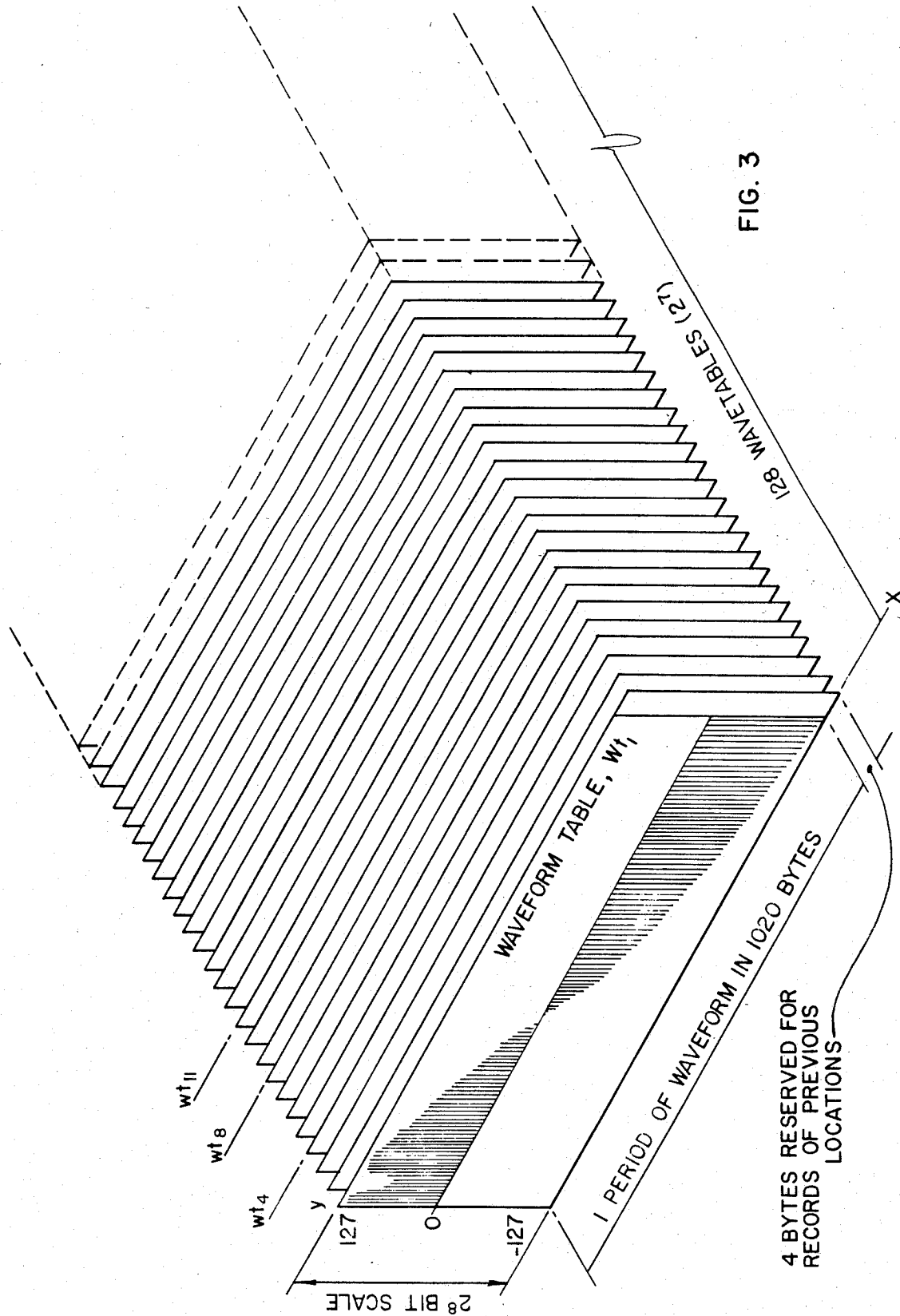


FIG. 3

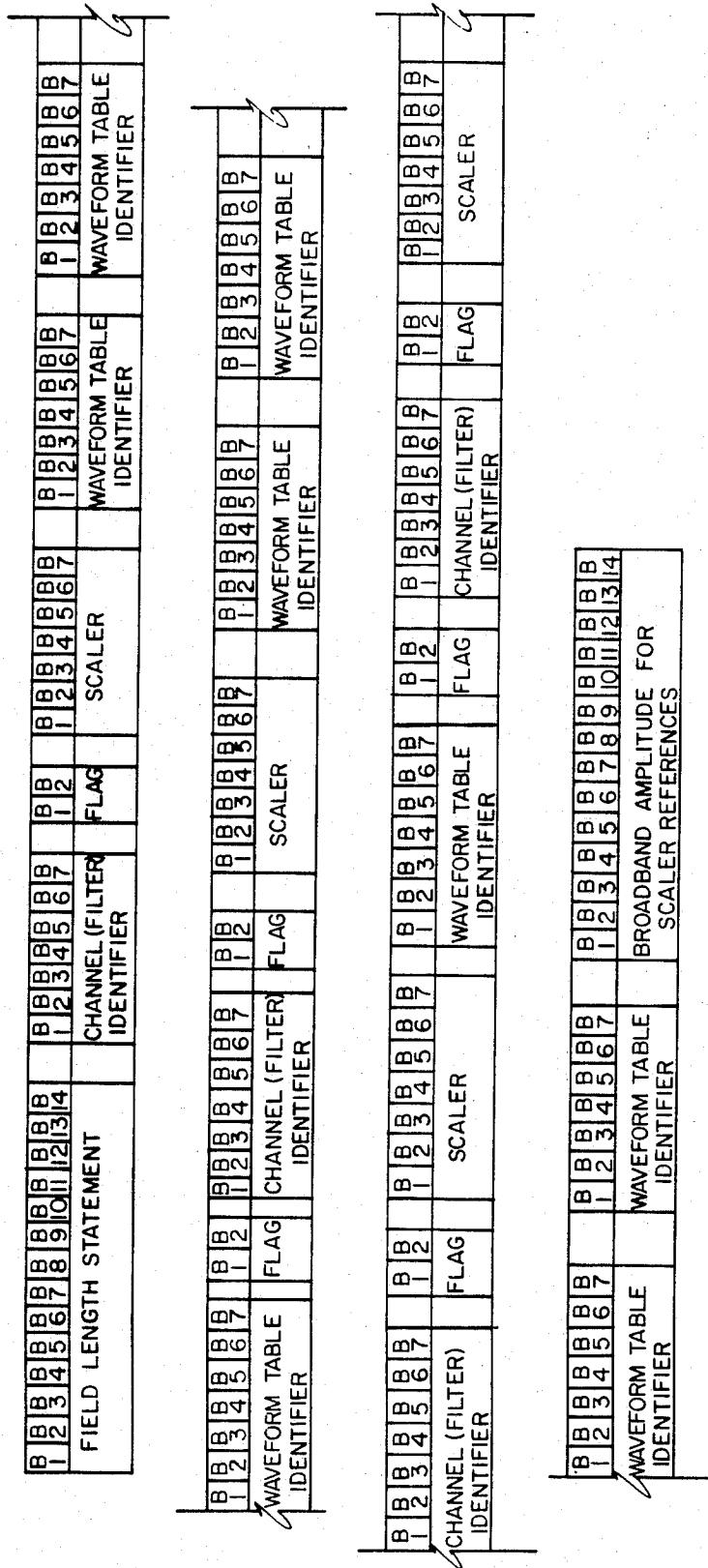


FIG. 4

NOTE: PARITY BITS NOT SHOWN

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