

**United States Patent** [19]  
**Schwartz**

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[54] **AUDIO AND VIDEO DIGITAL RECORDING AND PLAYBACK SYSTEM**  
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 [73] **Assignee:** CompuSonics Video Corporation, Palo Alto, Calif.  
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 [22] **Filed:** Sep. 17, 1985

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**Related U.S. Application Data**

[63] Continuation-in-part of Ser. No. 651,111, Sep. 17, 1984, which is a continuation-in-part of Ser. No. 486,561, Apr. 19, 1983, Pat. No. 4,472,747.  
 [51] **Int. Cl.<sup>4</sup>** ..... G11B 5/00; G10L 5/02  
 [52] **U.S. Cl.** ..... 360/32; 381/51  
 [58] **Field of Search** ..... 381/51, 41; 360/32; 358/22; 340/703, 717, 747

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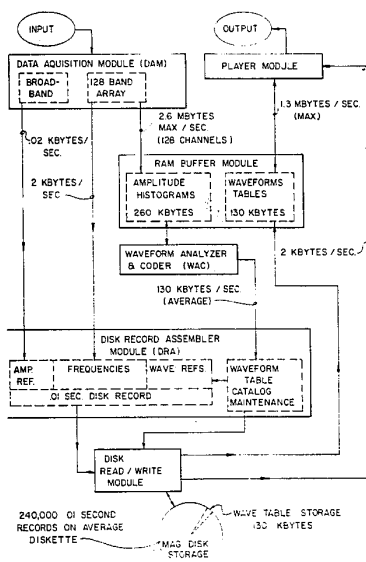
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[57] **ABSTRACT**

A microcomputer system for converting an analog signal, such as an audio or video signal representative of sound or video 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. The system includes reductive analytic means where the original digital data stream is converted to a sequential series of spectrograms, signal amplitude histograms and waveform code tables. Approximately 100 times less storage space than previously required for the storage of digitized signals 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.

**3 Claims, 18 Drawing Figures**



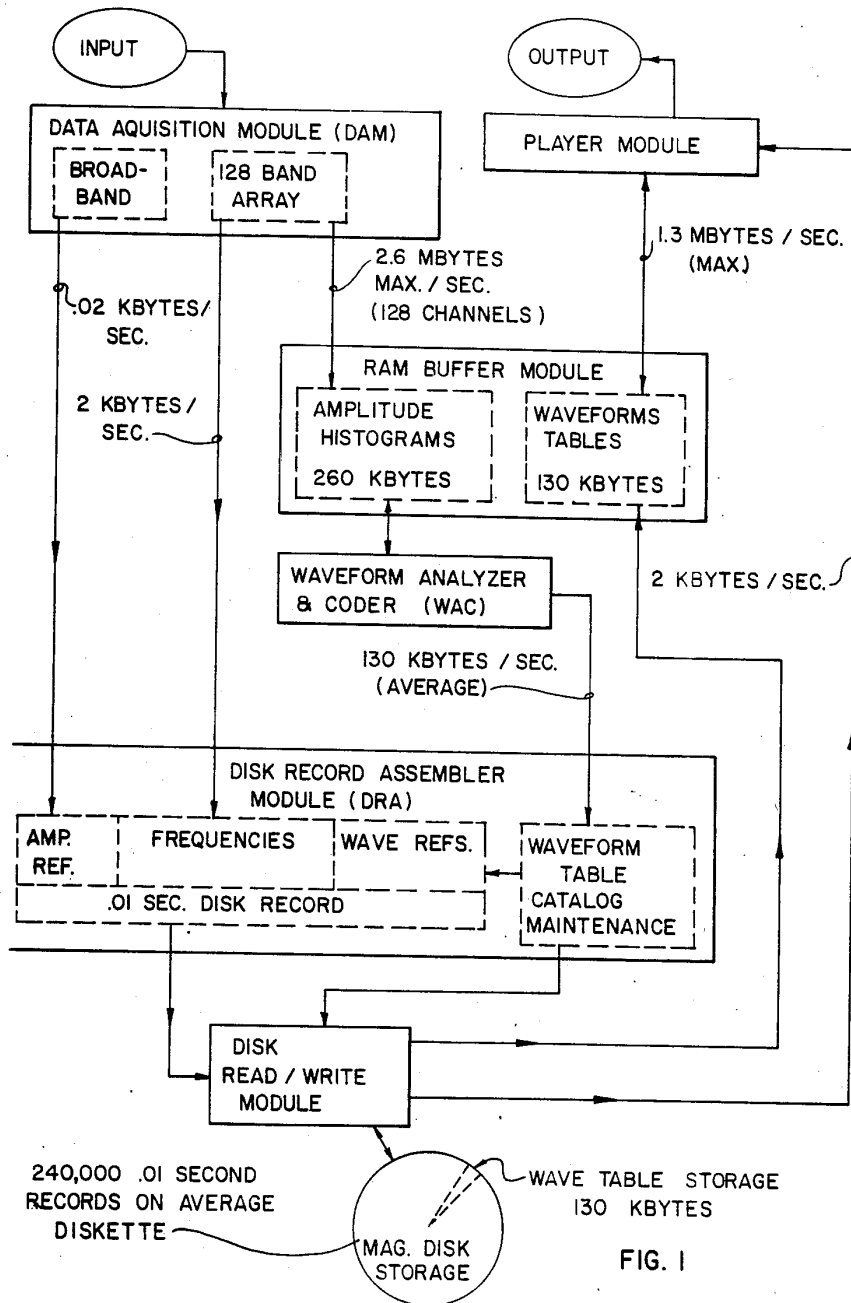
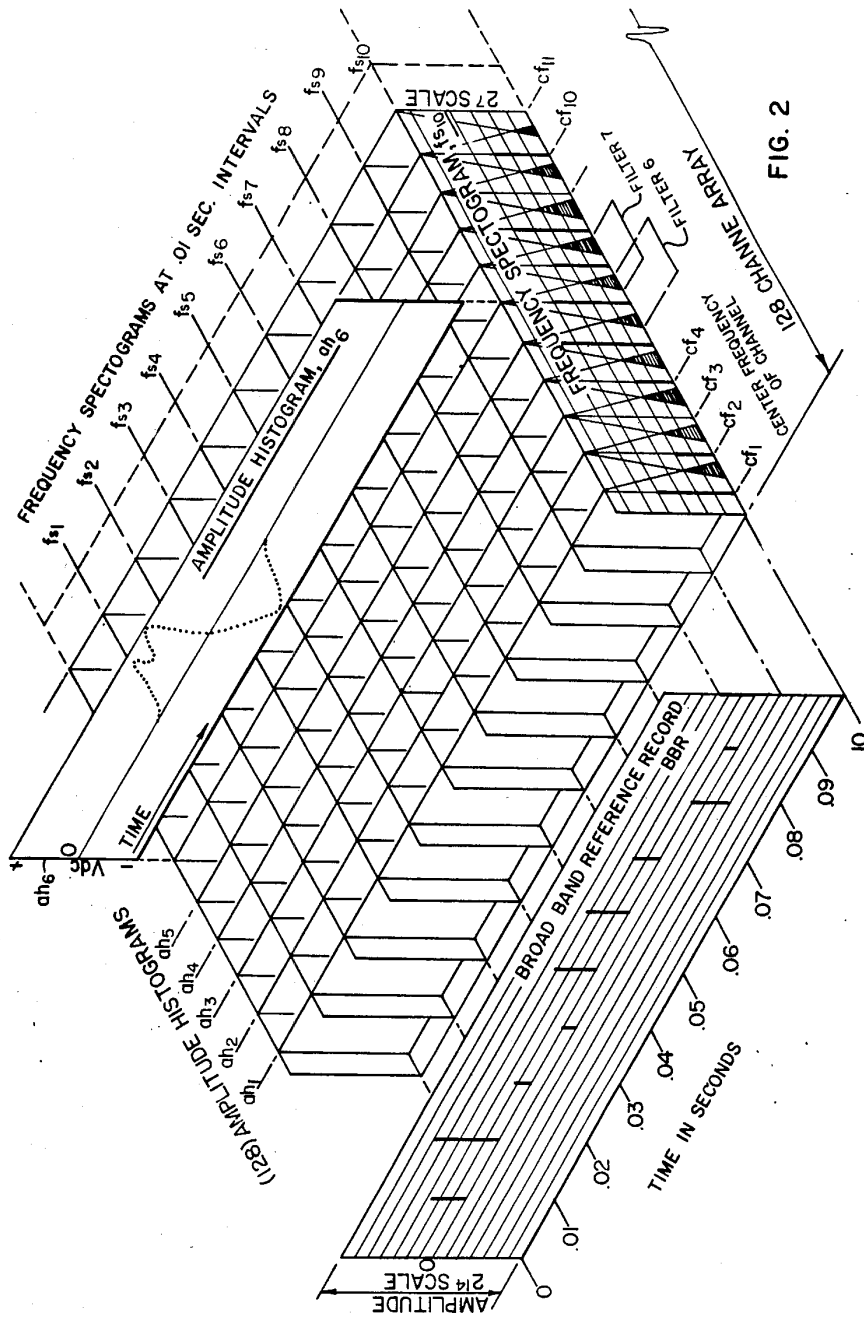


FIG. 1



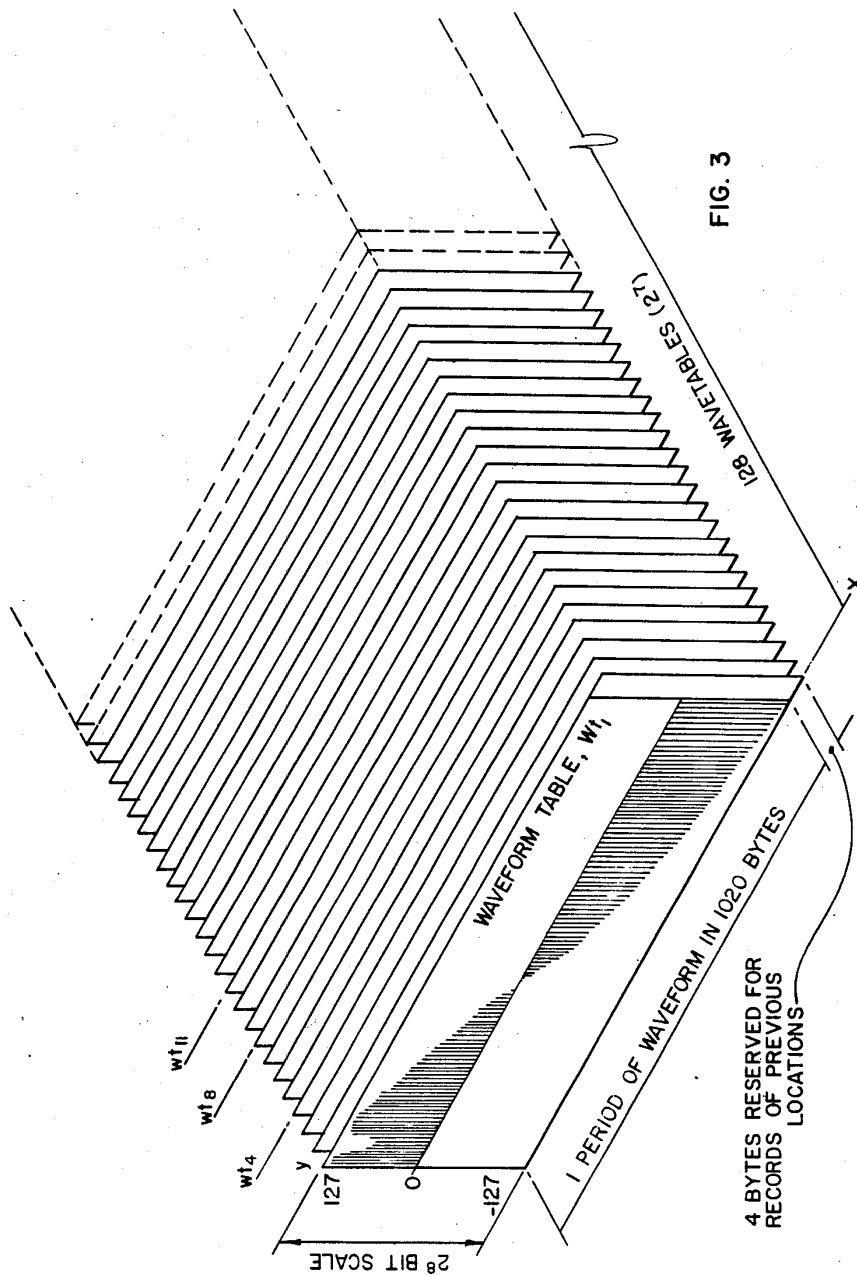


FIG. 3

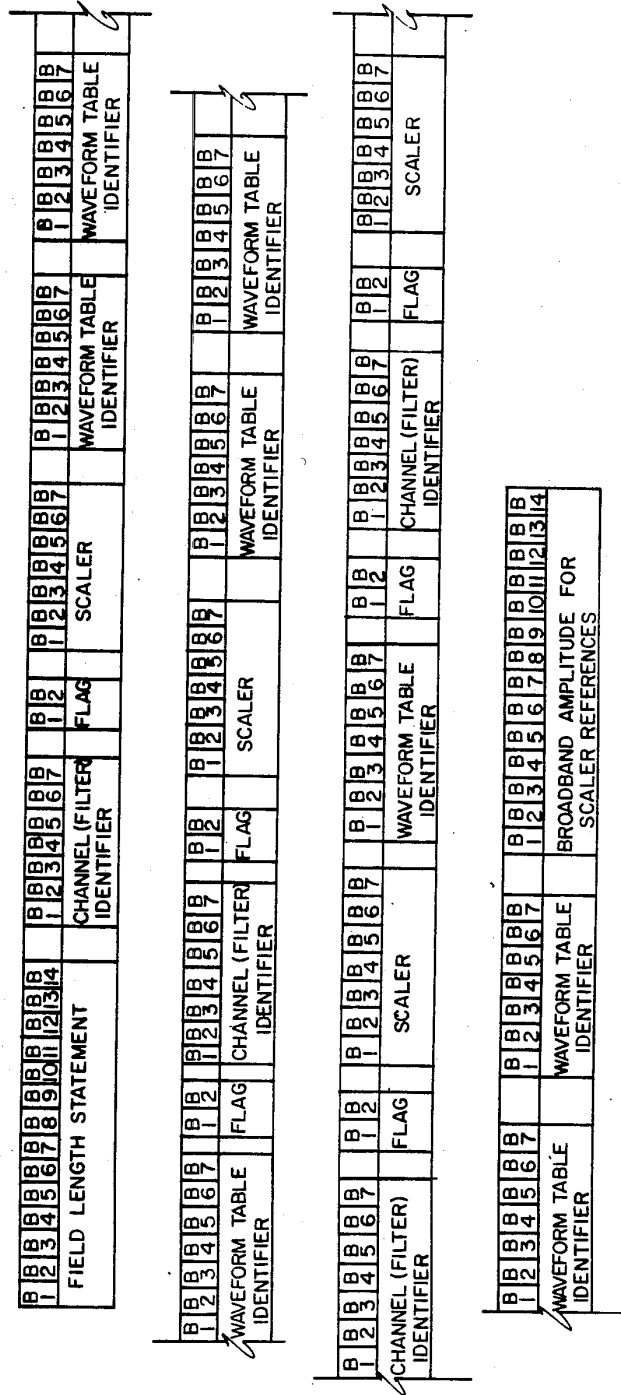


FIG. 4

NOTE: PARITY BITS NOT SHOWN

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