

# United States Patent [19]

Jeffers et al.

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[54] **DIRECT BROADCAST SATELLITE SIGNAL TRANSMISSION SYSTEM**

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[73] Assignee: **General Instrument Corp., New York, N.Y.**

[21] Appl. No.: **35,262**

[22] Filed: **Apr. 2, 1987**

### Related U.S. Application Data

[63] Continuation of Ser. No. 729,290, May 1, 1985, abandoned.

[51] Int. Cl.<sup>4</sup> ..... **H04N 7/167**

[52] U.S. Cl. .... **380/15; 380/19; 380/20; 358/84**

[58] Field of Search ..... **380/10, 20, 15, 19; 358/84; 455/2**

### [56] References Cited

#### U.S. PATENT DOCUMENTS

4,225,884 9/1980 Block et al. .... 358/122  
4,292,650 9/1981 Hendrickson ..... 358/122  
4,388,643 6/1983 Aminetzah ..... 358/122  
4,388,645 6/1983 Cox et al. .... 358/147  
4,393,404 7/1983 Cox et al. .... 358/147  
4,394,687 7/1983 Hutt et al. .... 358/147

4,424,532 1/1984 den Toonder et al. .... 358/120  
4,484,217 11/1984 Block et al. .... 358/114  
4,531,020 7/1985 Wechselberger et al. .... 358/123  
4,531,021 7/1985 Bluestein et al. .... 358/122  
4,536,791 8/1985 Campbell ..... 358/114  
4,575,755 3/1986 Schoeneberger ..... 358/120

### OTHER PUBLICATIONS

"Zeitmultiplex analoger Signal-Komponenten für das Satelliter-Fernsehen," *Funk-Technik* 39 (1984), Heft 6, pp. 228-231.

McGowan, Michael J., "Process Bus Protocol Orchestrates Distributed or Centralized Control," *Control Engineering*, September, 1980, pp. 129-132.

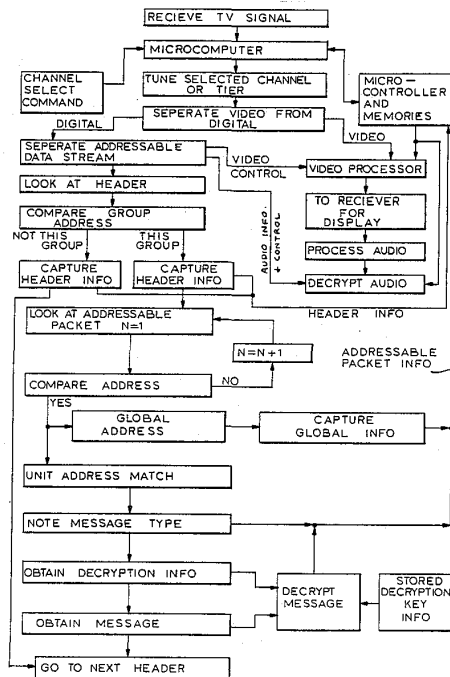
Primary Examiner—Stephen C. Buczinski

Assistant Examiner—Melissa L. Koltak

### [57] ABSTRACT

Audio and control signals are digitized and inserted in the horizontal blanking intervals of the distributed composite television signal. The control signals are in the form of a data stream which includes a header containing group address, sync, and program-related information applicable to all receiving units, and a plurality of portions which are addressable and contain information applicable to the control of particular individual receiving units in the addressed group. The information in the addressable portions can be altered on a real time basis such that the system operator has direct control over certain functions of individual receiving units from the transmission end.

32 Claims, 9 Drawing Sheets



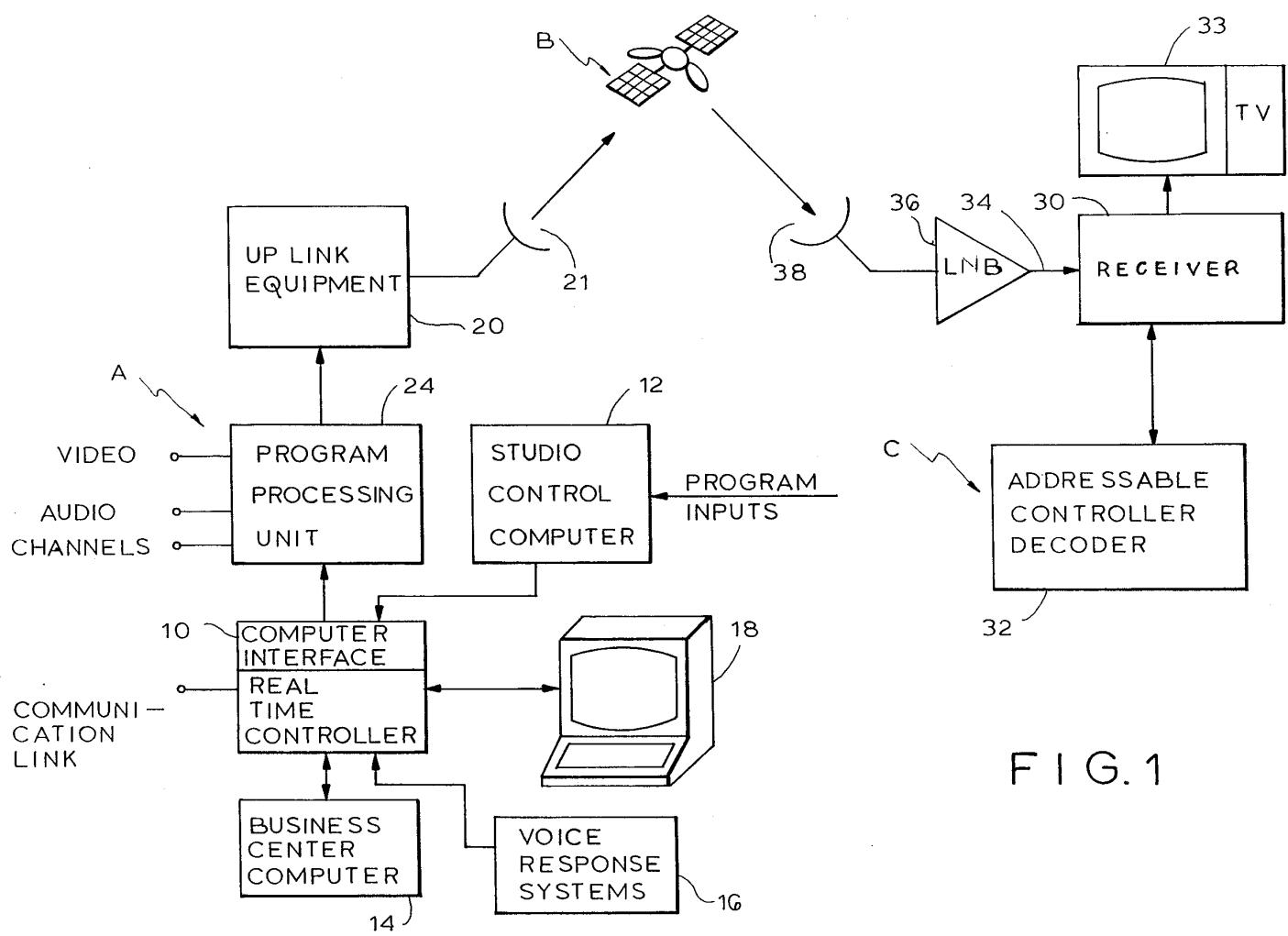
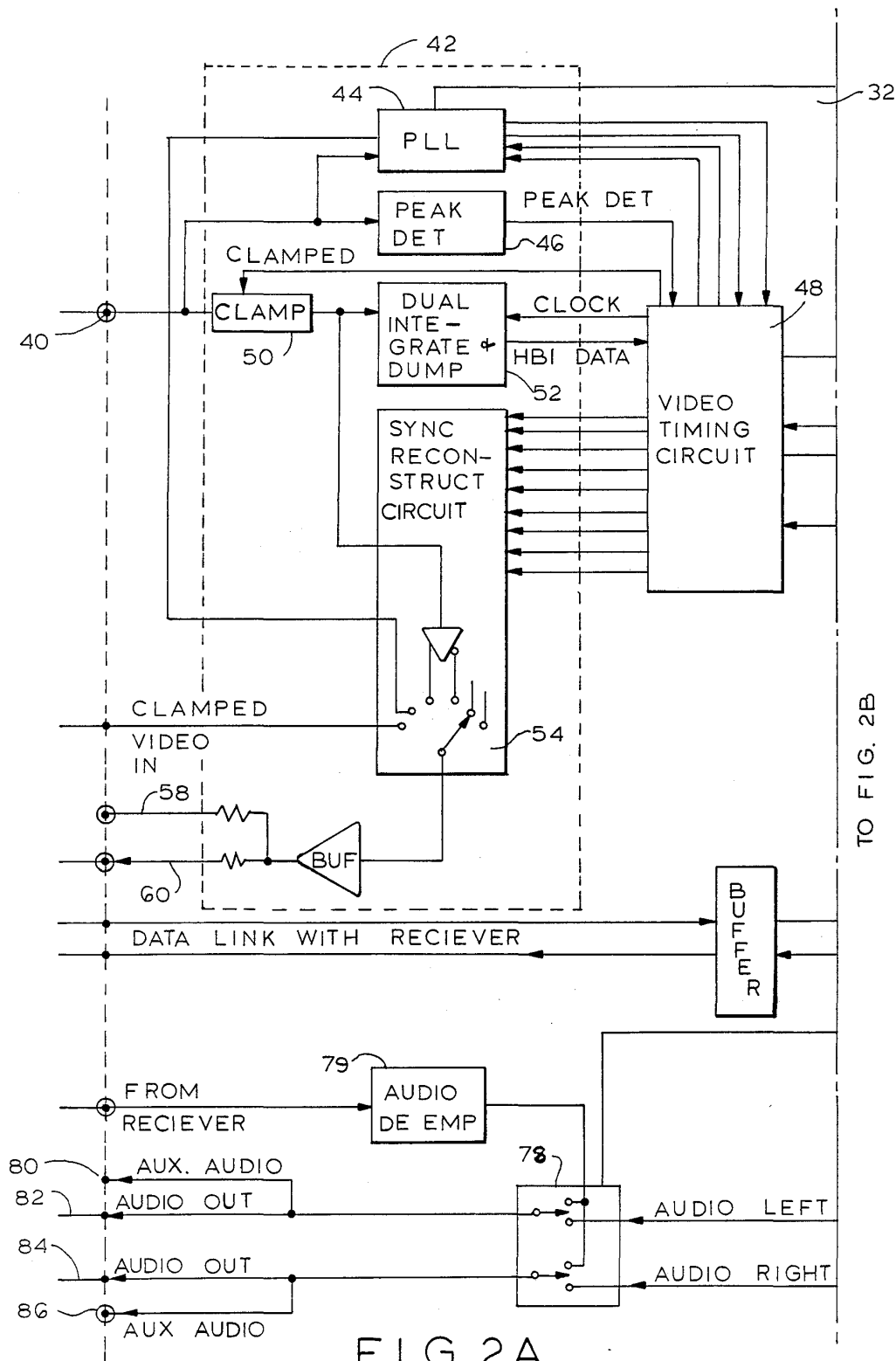


FIG. 1



TO FIG. 2B

FIG. 2A

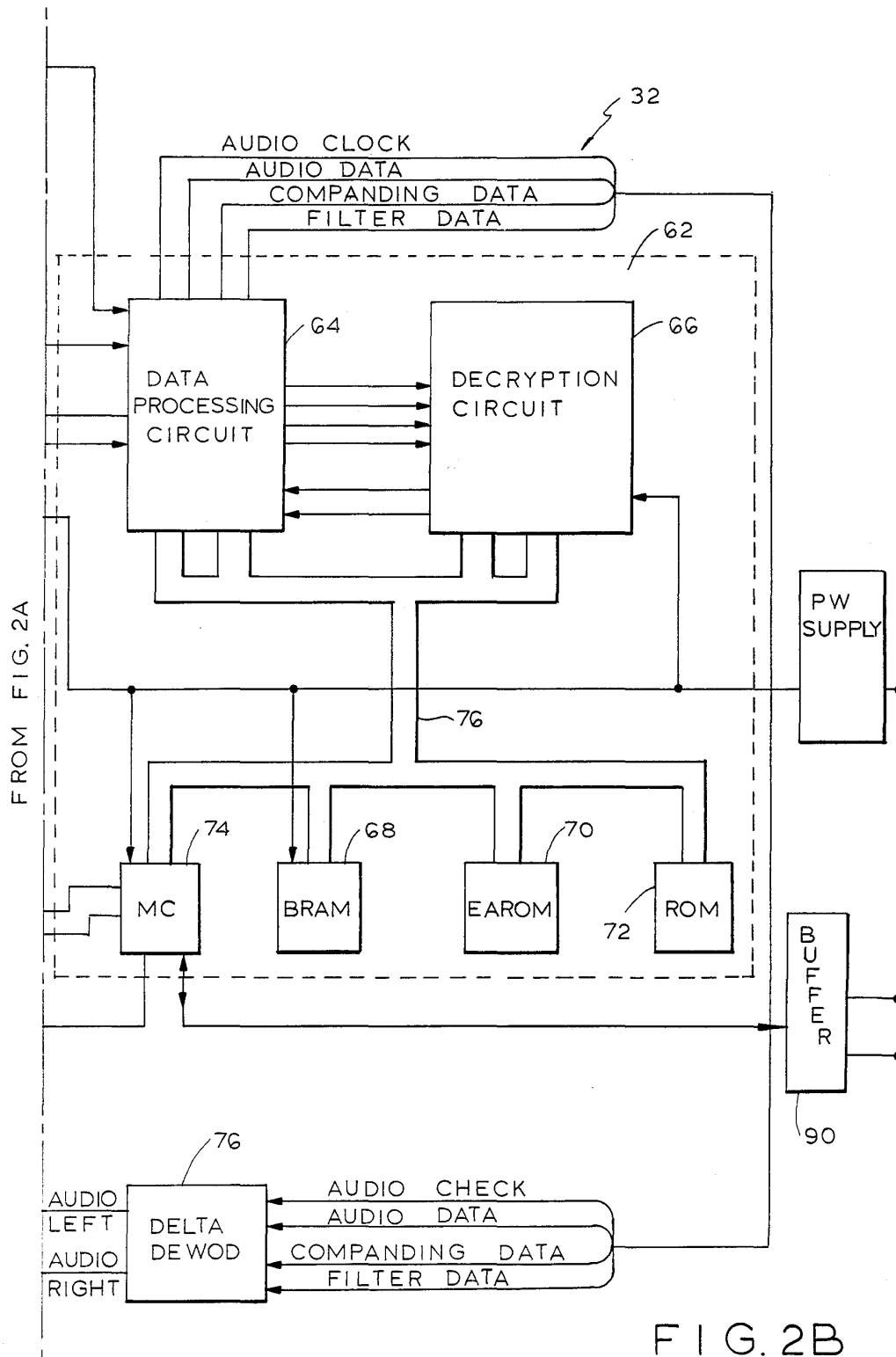


FIG. 2B

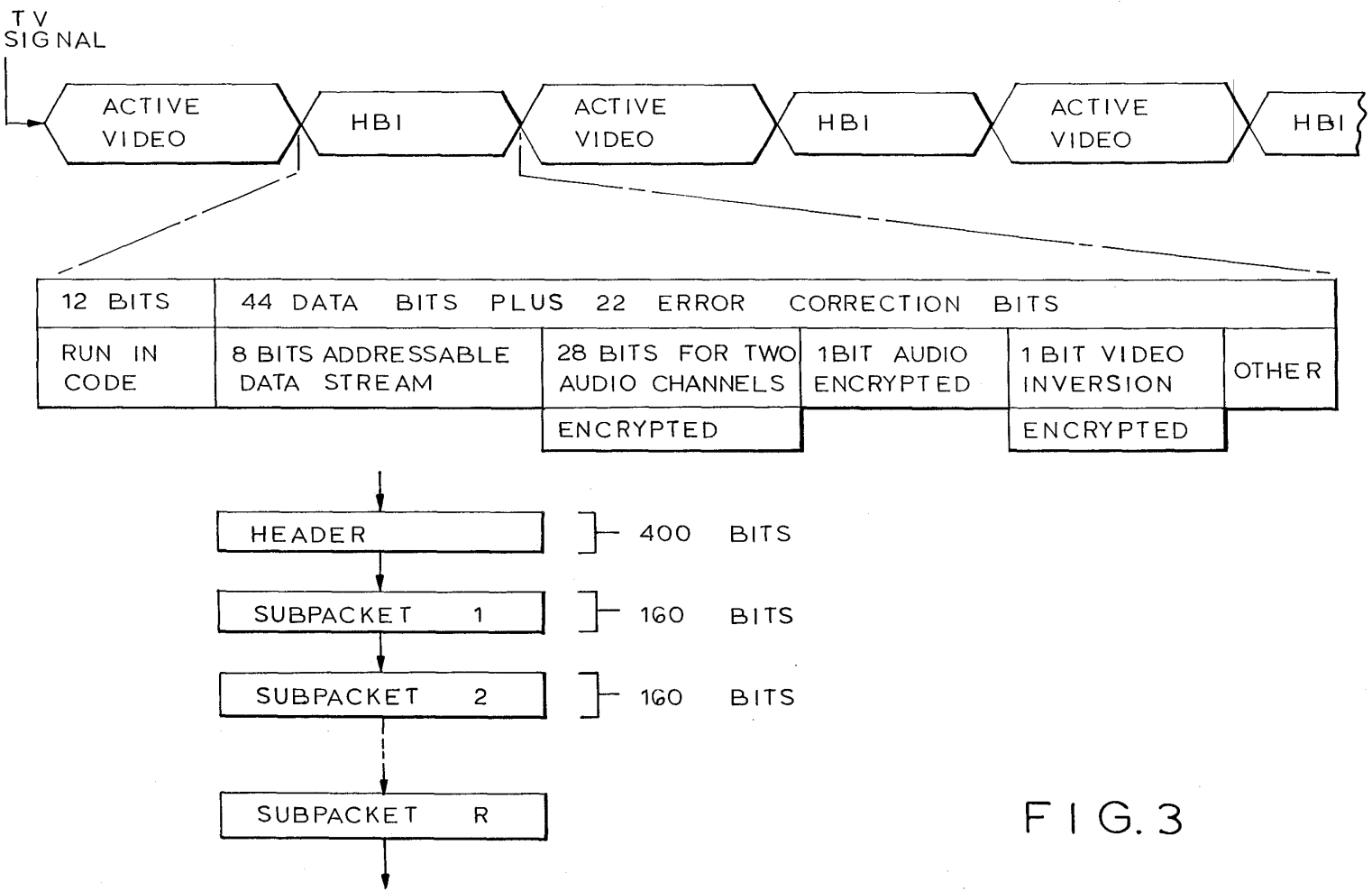


FIG. 3

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