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United States Patent [19]

Romesburg et al.

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[45] **Date of Patent: May 12, 1992**

[54] **DATA TRANSFER FROM AN EXTERNAL COMPUTER TO A TELEVISION RECEIVER HAVING PICTURE-IN-PICTURE CAPABILITY**

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[21] Appl. No.: **511,269**

[22] Filed: **Apr. 19, 1990**

[51] **Int. Cl.**[5] **H04N 5/272**

[52] **U.S. Cl.** **358/183;** 358/903

[58] **Field of Search** 358/183, 182, 181, 180, 358/903

[56] **References Cited**

U.S. PATENT DOCUMENTS

4,665,438	5/1987	Miron et al.	358/183
4,729,027	3/1988	Hakamada et al.	358/183
4,750,038	6/1988	Welles et al.	358/183
4,809,069	2/1989	Meyer et al.	358/183
4,812,909	3/1989	Yokobayashi et al.	358/183
4,855,813	8/1989	Russell et al.	358/903
4,862,269	8/1989	Sonoda et al.	358/183
4,890,168	12/1989	Inoue et al.	358/183
4,914,516	4/1990	Duffield	358/183
4,918,531	4/1990	Johnson	358/183
4,935,815	6/1990	Ichikawa et al.	358/183
4,954,883	9/1990	Belmares-Sarabis et al.	358/183
4,994,914	2/1991	Wiseman et al.	358/183
5,014,128	5/1991	Cheu	358/183
5,016,106	5/1991	Yong-Je et al.	358/181

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[57] **ABSTRACT**

The digitized video image data stored in a video RAM in a pix-in-pix television receiver is modified by the addition of digital data from an external computer via a computer interface circuit under control of the pix-in-pix controller. The computer interface circuit is coupled to the internal controller of the television receiver via an external input terminal. The additional digital data received from the external computer may be representative of either text or graphics to be merged into the stored video image.

6 Claims, 5 Drawing Sheets

Microfiche Appendix Included
(1 Microfiche, 12 Pages)

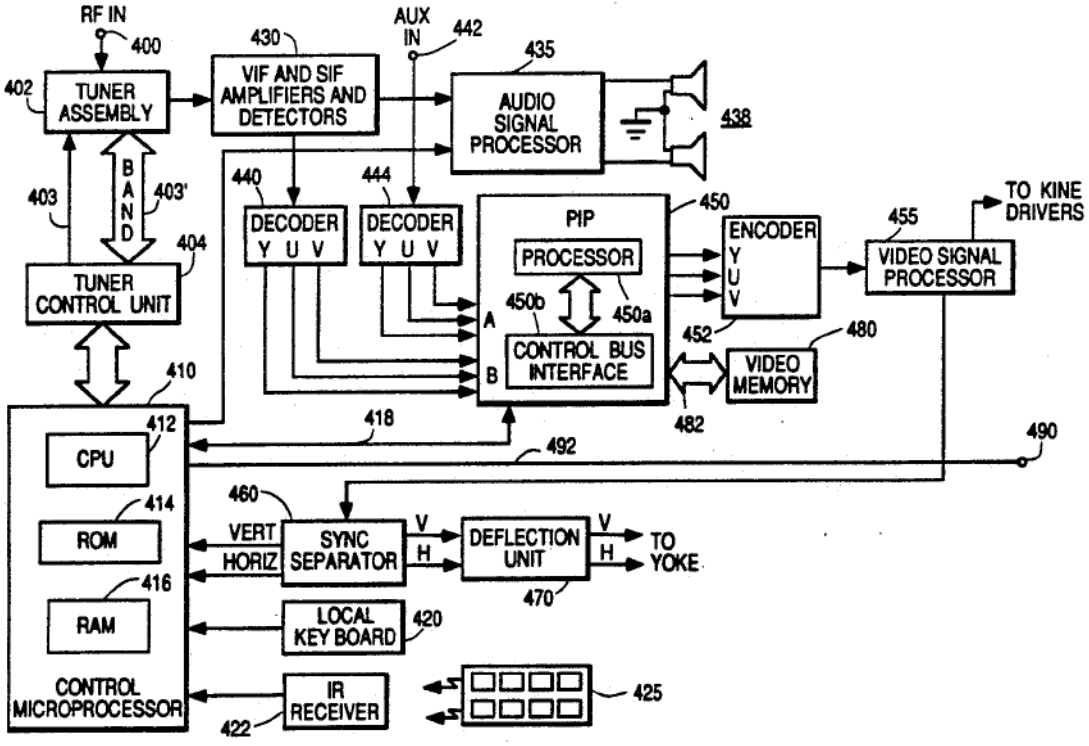

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FIG. 1

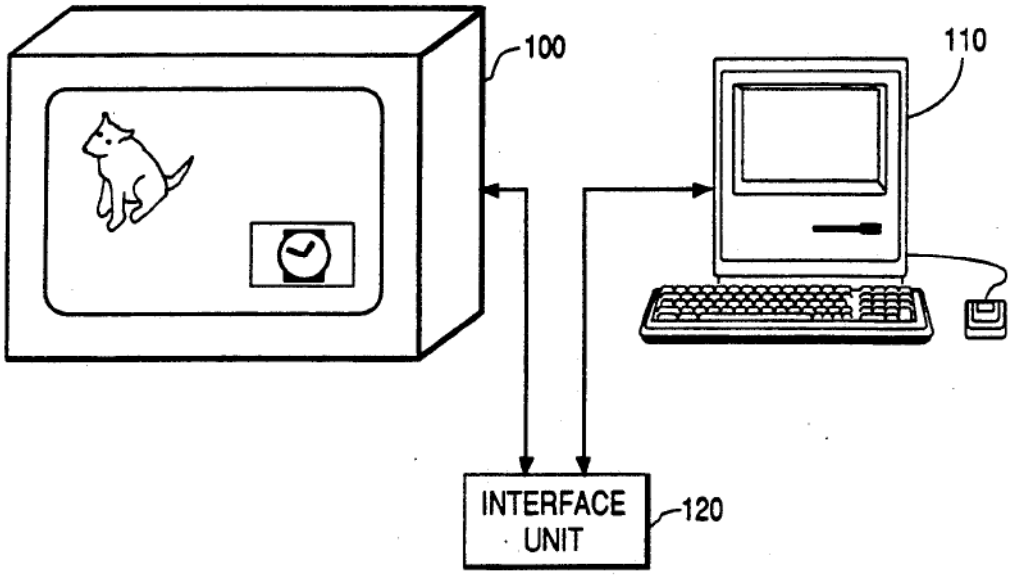
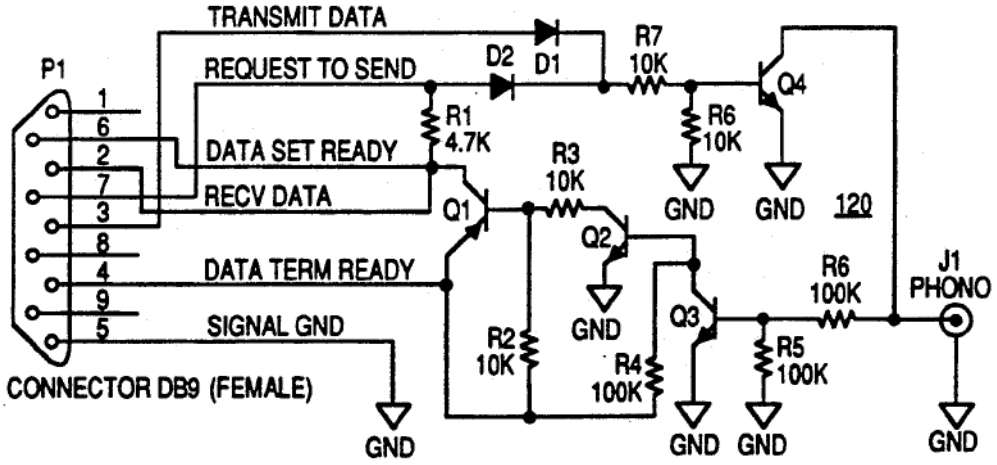


FIG. 2



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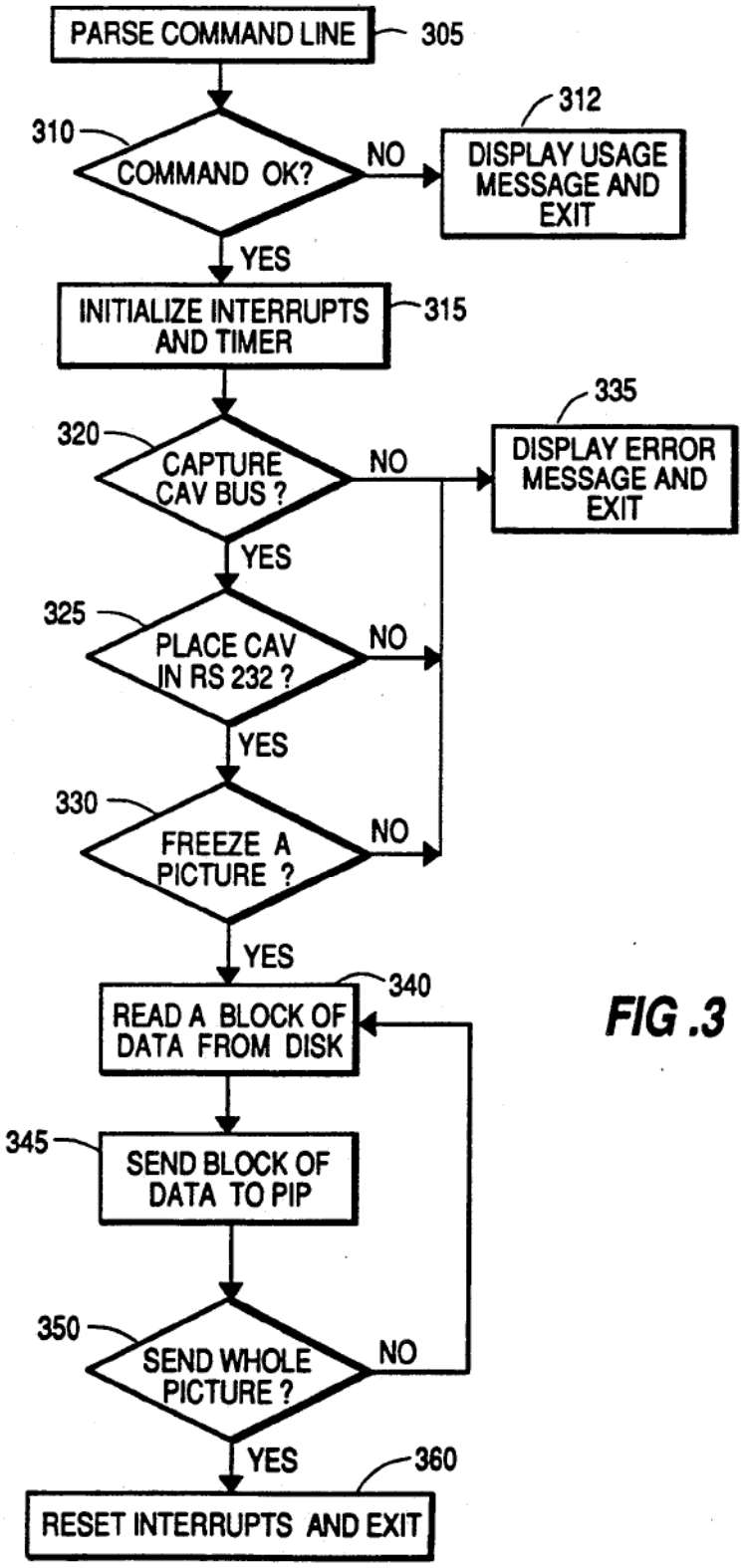

FIG .3

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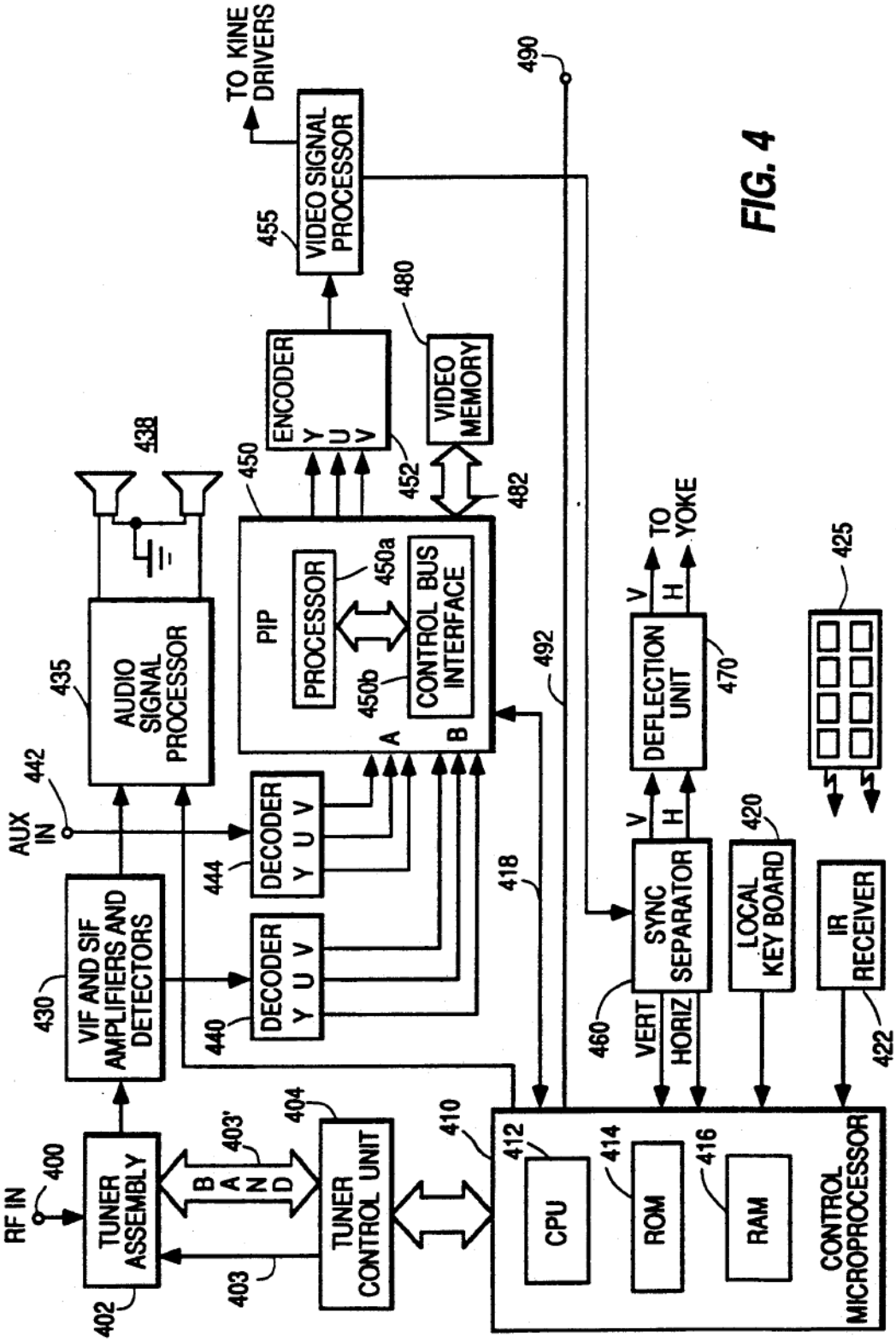

FIG. 4

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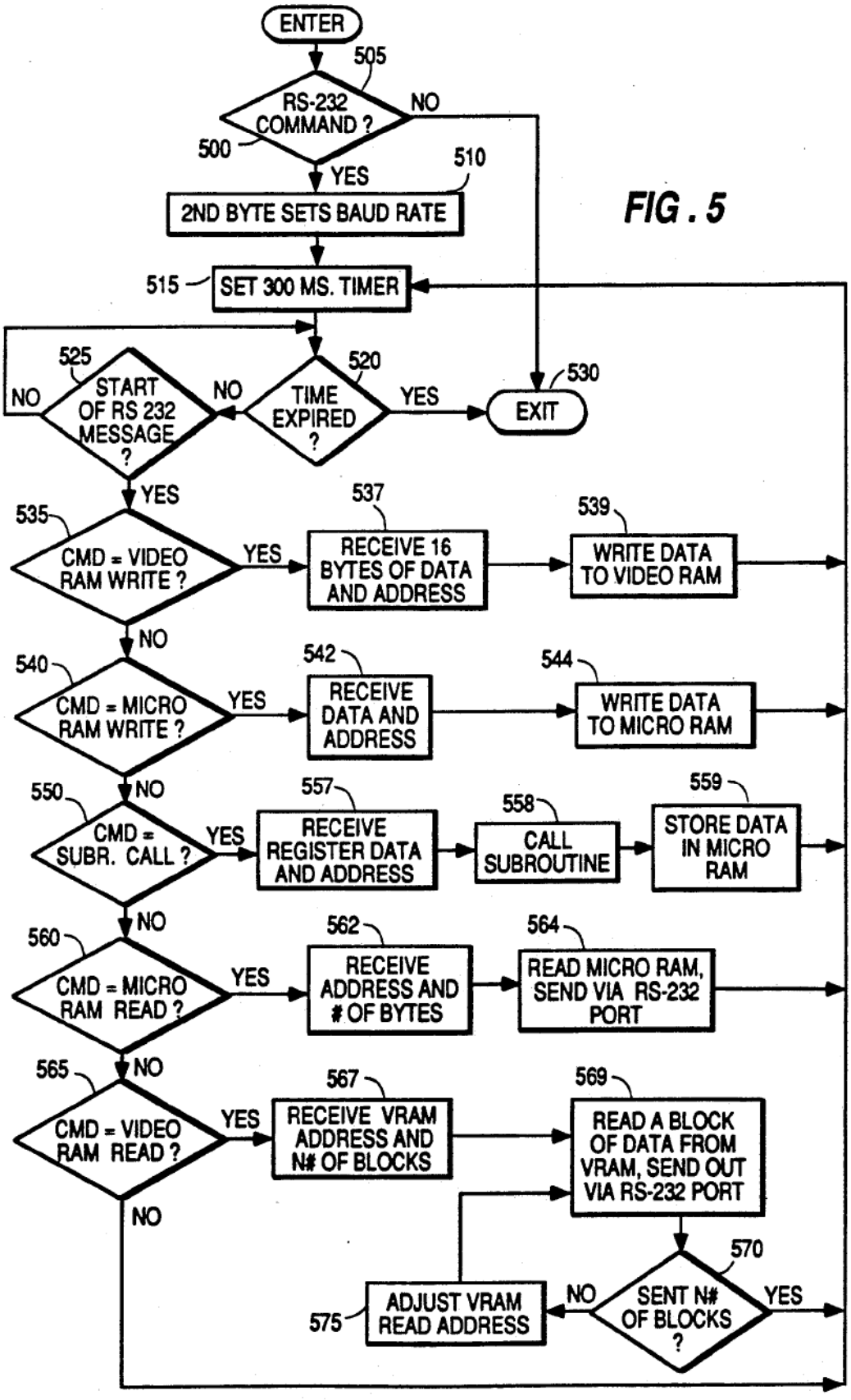

FIG. 5

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