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United States Patent [19]

Welsch et al.

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[45] Date of Patent: May 25, 1993

[54] **SEGMENTED MEMORY TRANSFER AND MESSAGE PRIORITY ON SYNCHRONOUS/ASYNCHRONOUS DATA BUS**

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[73] Assignee: **Motorola, Inc.**, Schaumburg, Ill.

[21] Appl. No.: **559,873**

[22] Filed: **Jul. 30, 1990**

[51] **Int. Cl.**[5] **G06F 13/00**

[52] **U.S. Cl.** **395/200**; 395/325; 395/425; 455/11.1; 455/33.1

[58] **Field of Search** ..... 364/DIG. 1, DIG. 2; 395/200, 425, 550, 275, 325; 455/11.1, 33.1, 54.1

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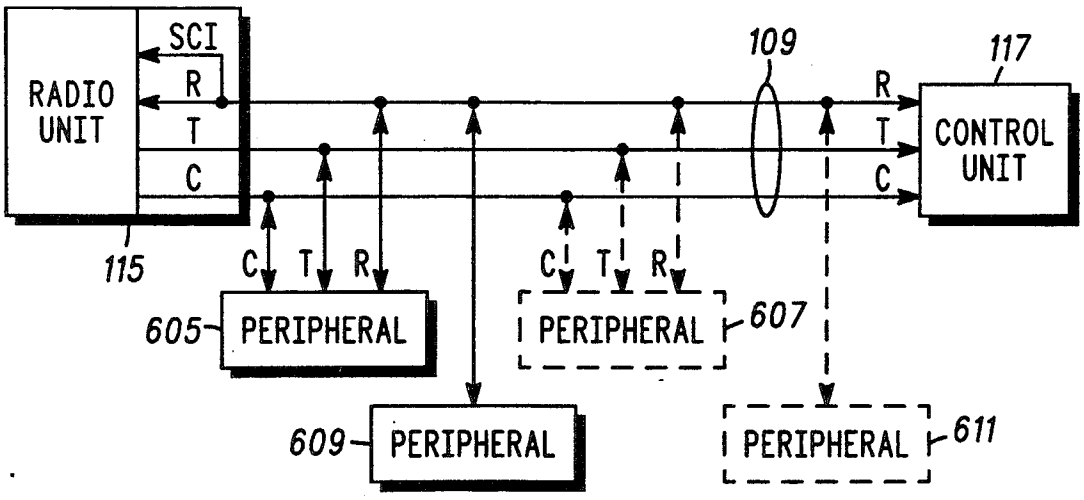
Primary Examiner—Robert L. Richardson

Attorney, Agent, or Firm—Raymond A. Jenski

[57] **ABSTRACT**

Apparatus and method for transferring segmented memory between memory units determines a need for memory transfer and searches a memory unit segment by segment until a valid data record is found. This valid data record is conveyed to another memory unit via the asynchronous mode. If a valid data records is not found within a predetermined amount of time, a message identifying the memory segment last searched is conveyed. If no remaining valid data records are found, a message with no information is conveyed. Priority is given to asynchronous messages.

22 Claims, 12 Drawing Sheets



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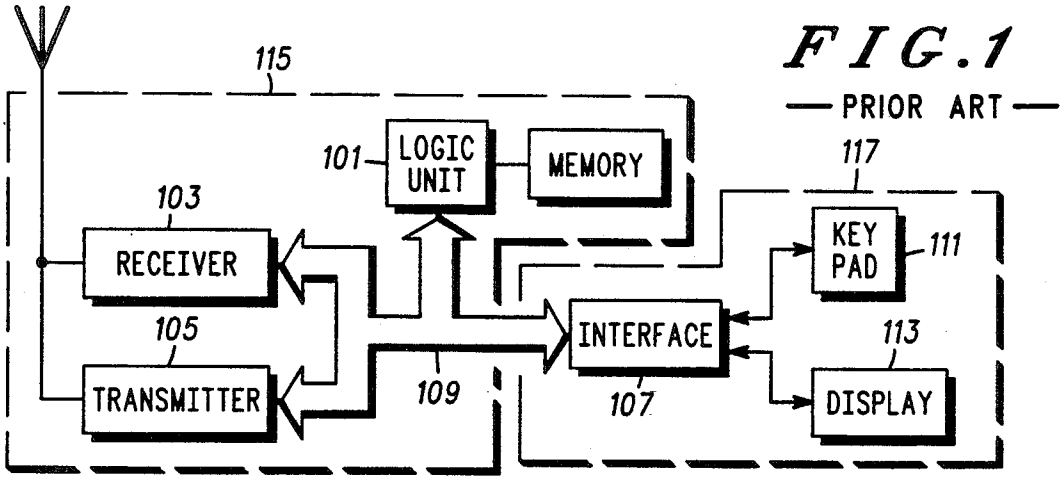

FIG. 1
— PRIOR ART —

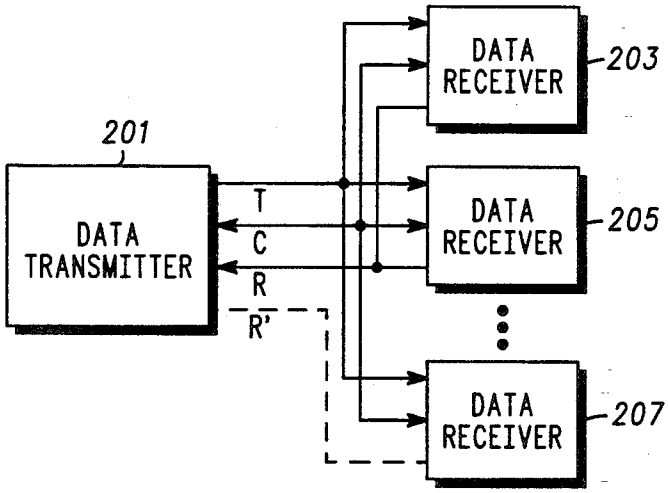

FIG. 2
— PRIOR ART —

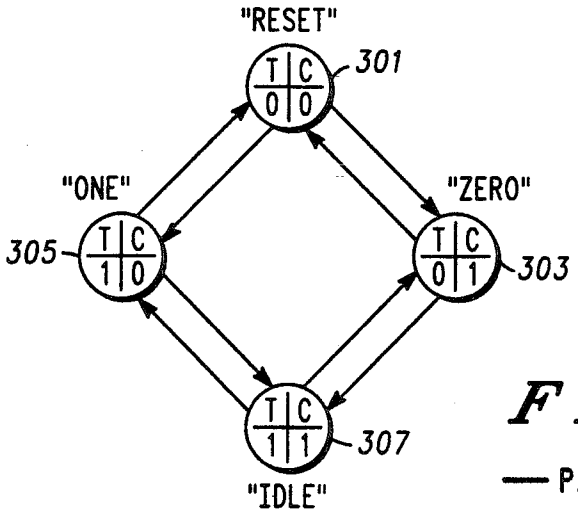

FIG. 3
— PRIOR ART —

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FIG. 4
— PRIOR ART —

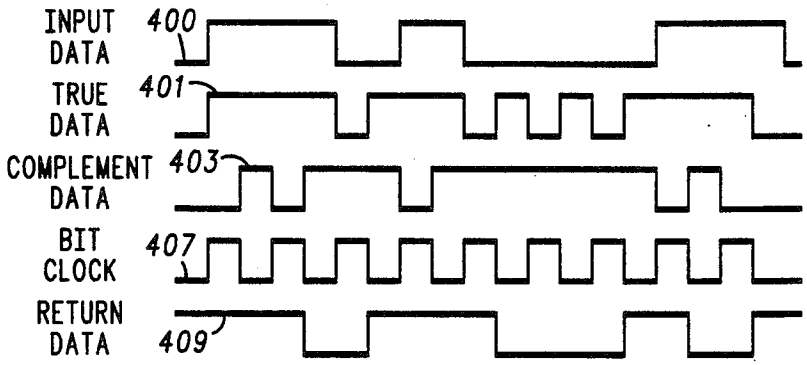


FIG. 5
— PRIOR ART —

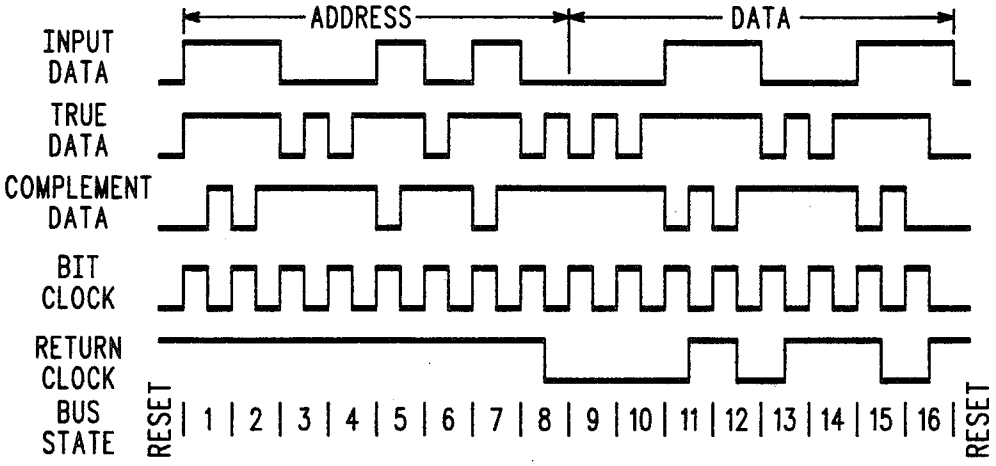
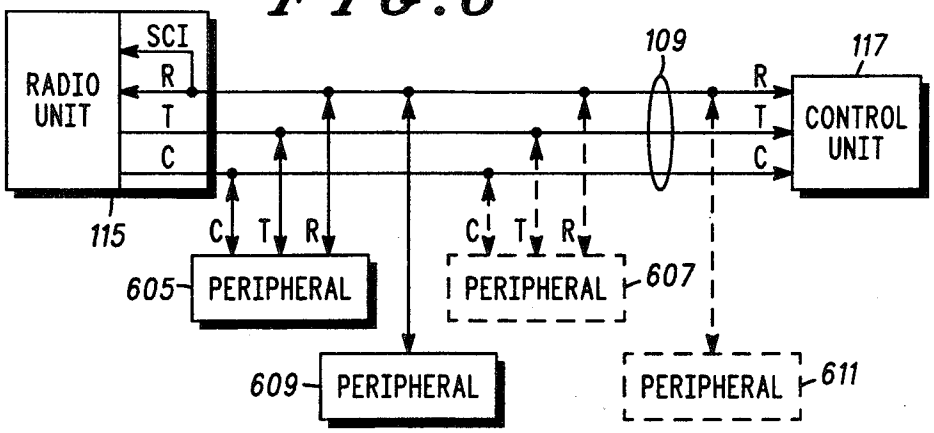


FIG. 6



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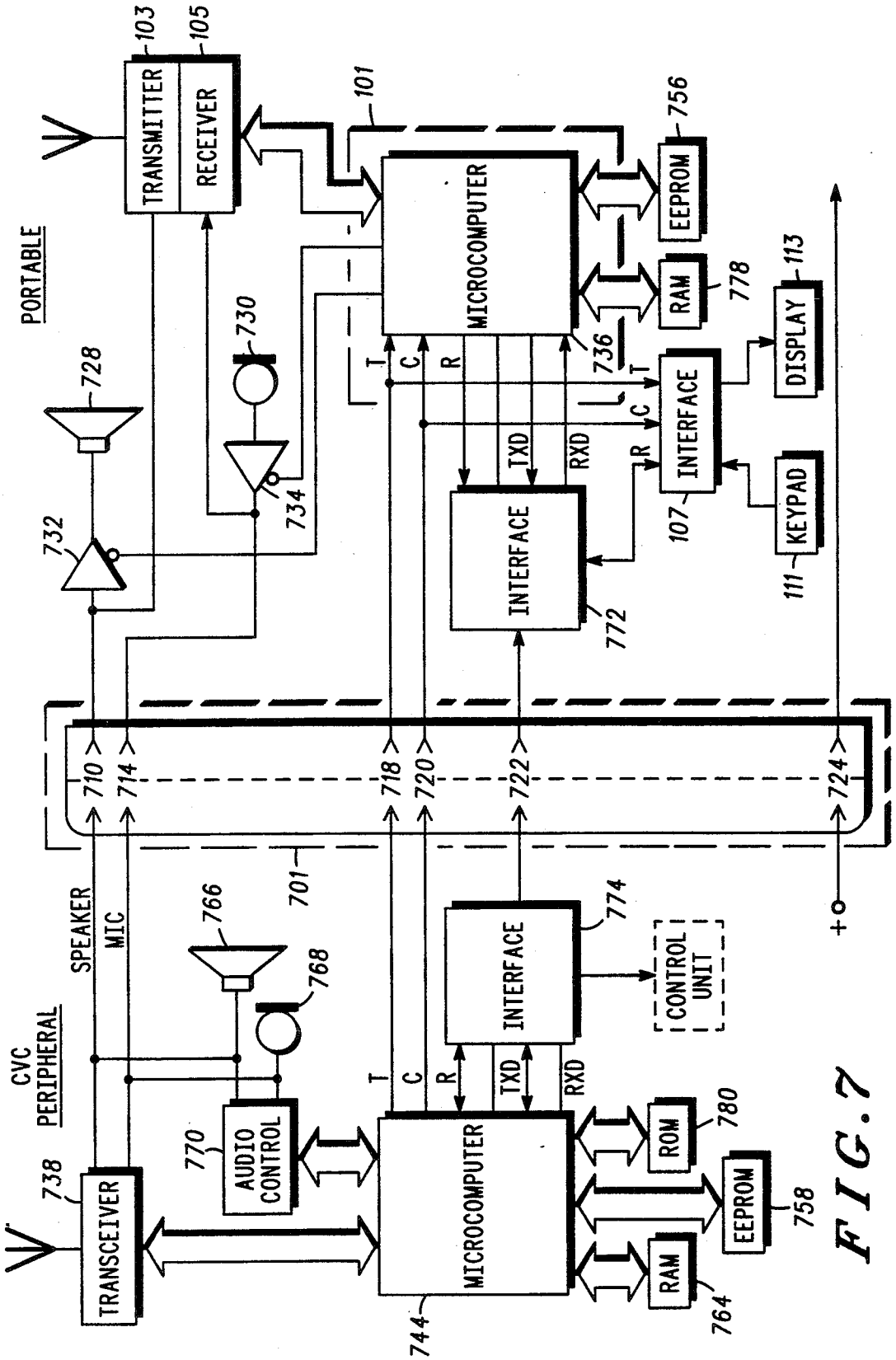

FIG. 7

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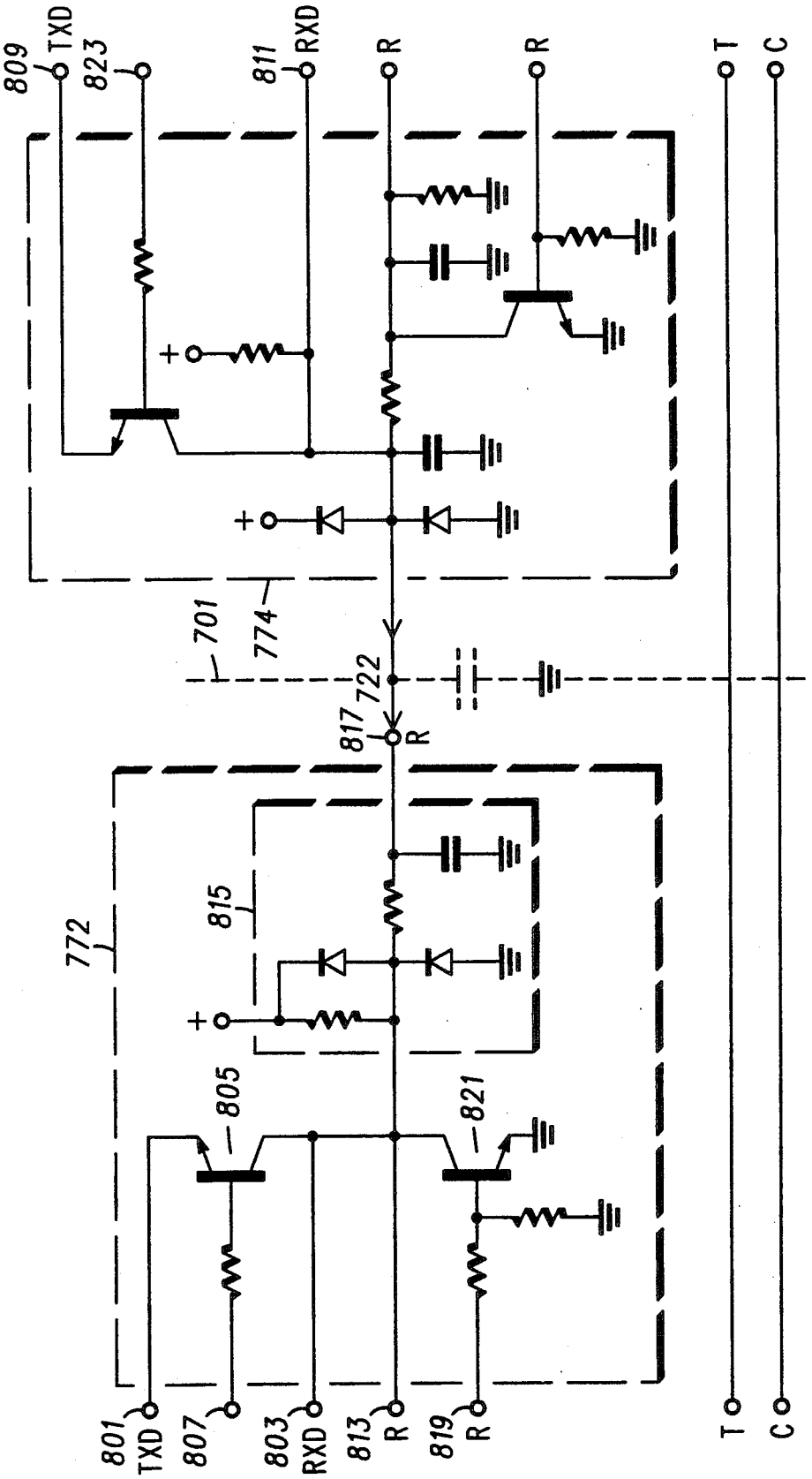

FIG. 8

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