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(12) **United States Patent**  
**Epstein**

(10) **Patent No.:** **US 6,993,134 B1**  
(45) **Date of Patent:** **Jan. 31, 2006**

(54) **KEY EXCHANGE VIA A PORTABLE  
REMOTE CONTROL DEVICE**

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(US)

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\* cited by examiner

(\* ) Notice: Subject to any disclaimer, the term of this  
patent is extended or adjusted under 35  
U.S.C. 154(b) by 0 days.

*Primary Examiner*—Emmanuel L. Moise  
*Assistant Examiner*—Paul E. Callahan

(21) Appl. No.: **09/370,488**

(57) **ABSTRACT**

(22) Filed: **Aug. 9, 1999**

(51) **Int. Cl.**  
**H04L 9/00** (2006.01)

The communications means that are commonly provided for  
the remote control of electronic components are utilized to  
effect an exchange of parameters to facilitate a crypto-  
graphic key exchange. The bidirectional remote control  
transceivers, typically infrared transceivers, that are com-  
monly used to communicate commands from the remote  
control device and to communicate feedback to the remote  
control device are configured to communicate parameters  
between a pair of consumer devices that are controllable by  
the remote control device. In a preferred embodiment of this  
invention the remote control device contains the control  
means to effect the transfer of these parameters between the  
consumer devices.

(52) **U.S. Cl.** ..... **380/262**; 713/171; 705/66;  
380/283; 380/285; 455/410; 455/352; 455/88;  
348/14.05

(58) **Field of Classification Search** ..... 455/88,  
455/352, 410; 348/14.05; 713/171; 705/66;  
380/262, 283-285

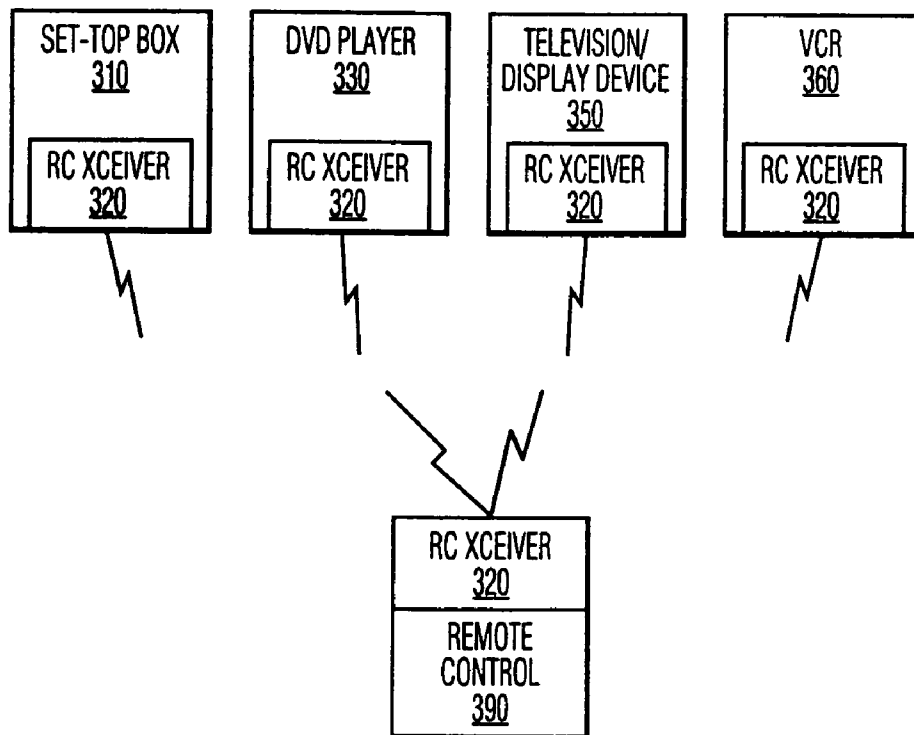
See application file for complete search history.

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**8 Claims, 4 Drawing Sheets**



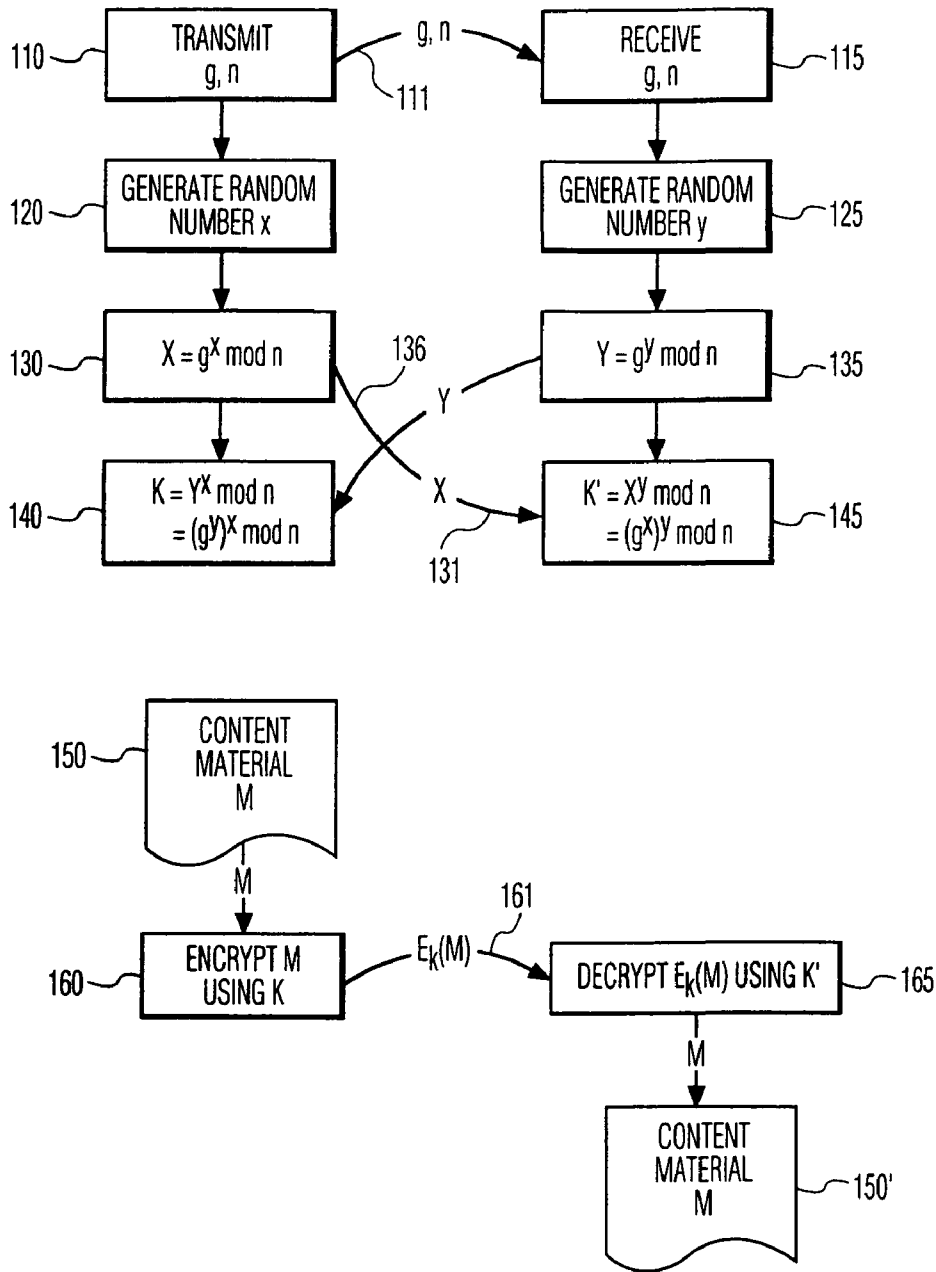


FIG. 1  
PRIOR ART

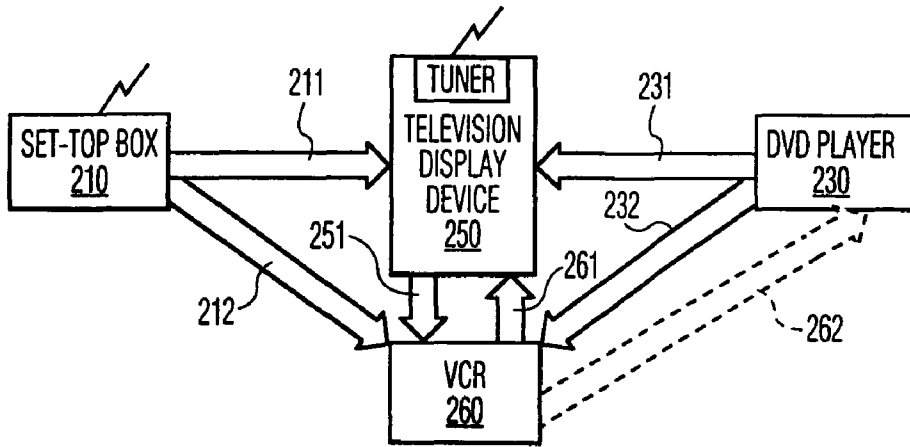


FIG. 2  
PRIOR ART

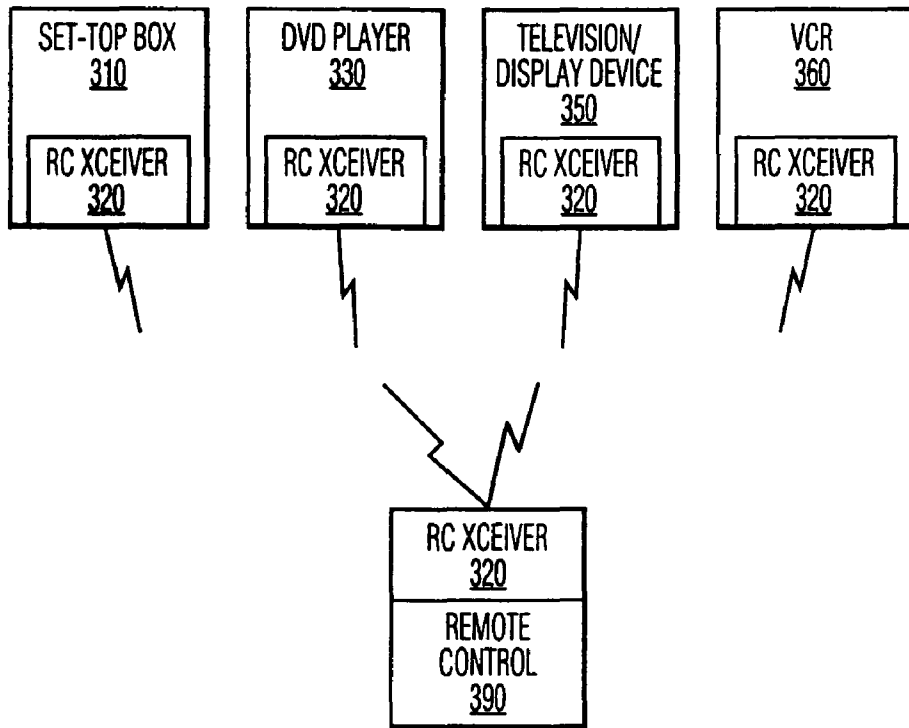


FIG. 3

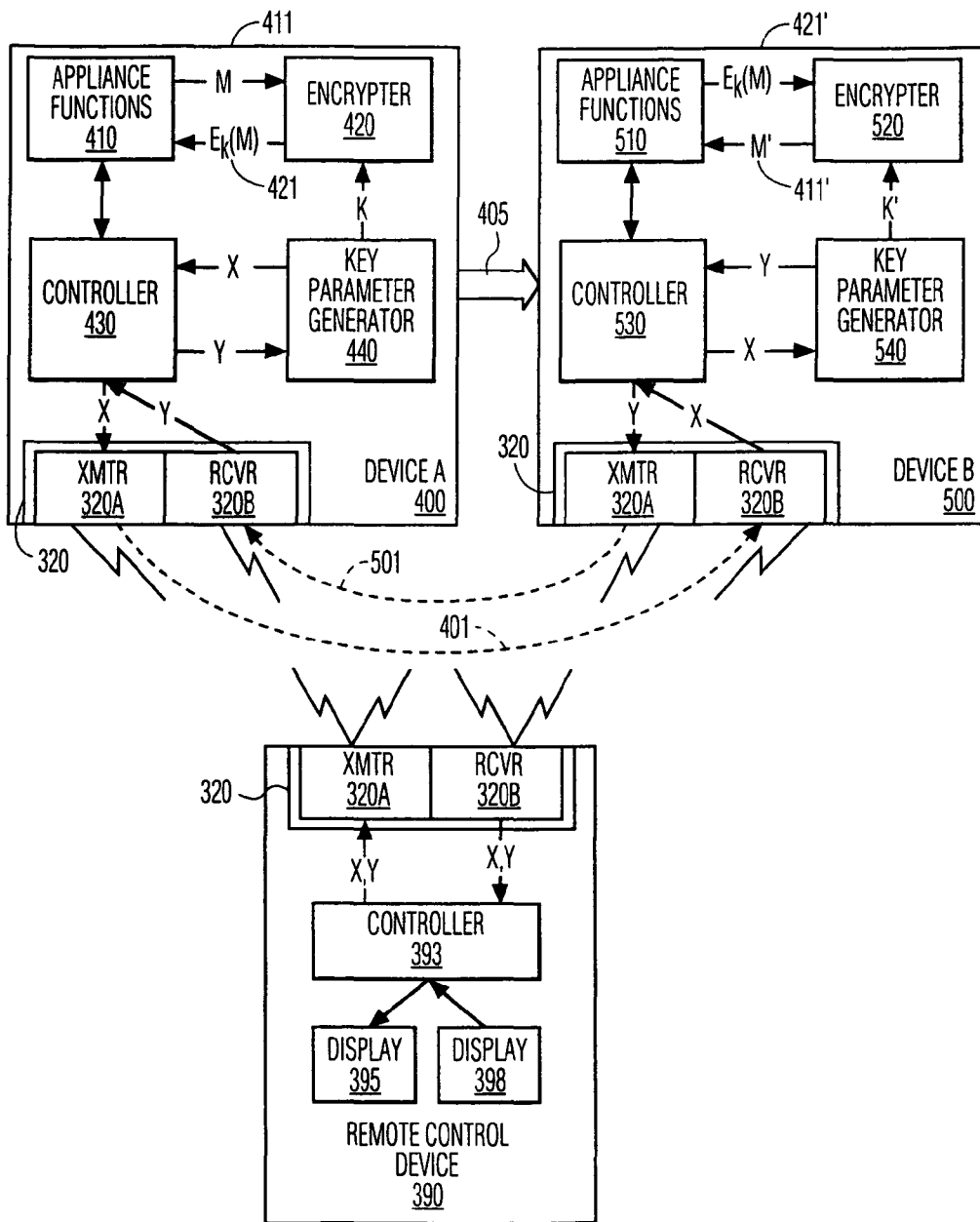


FIG. 4

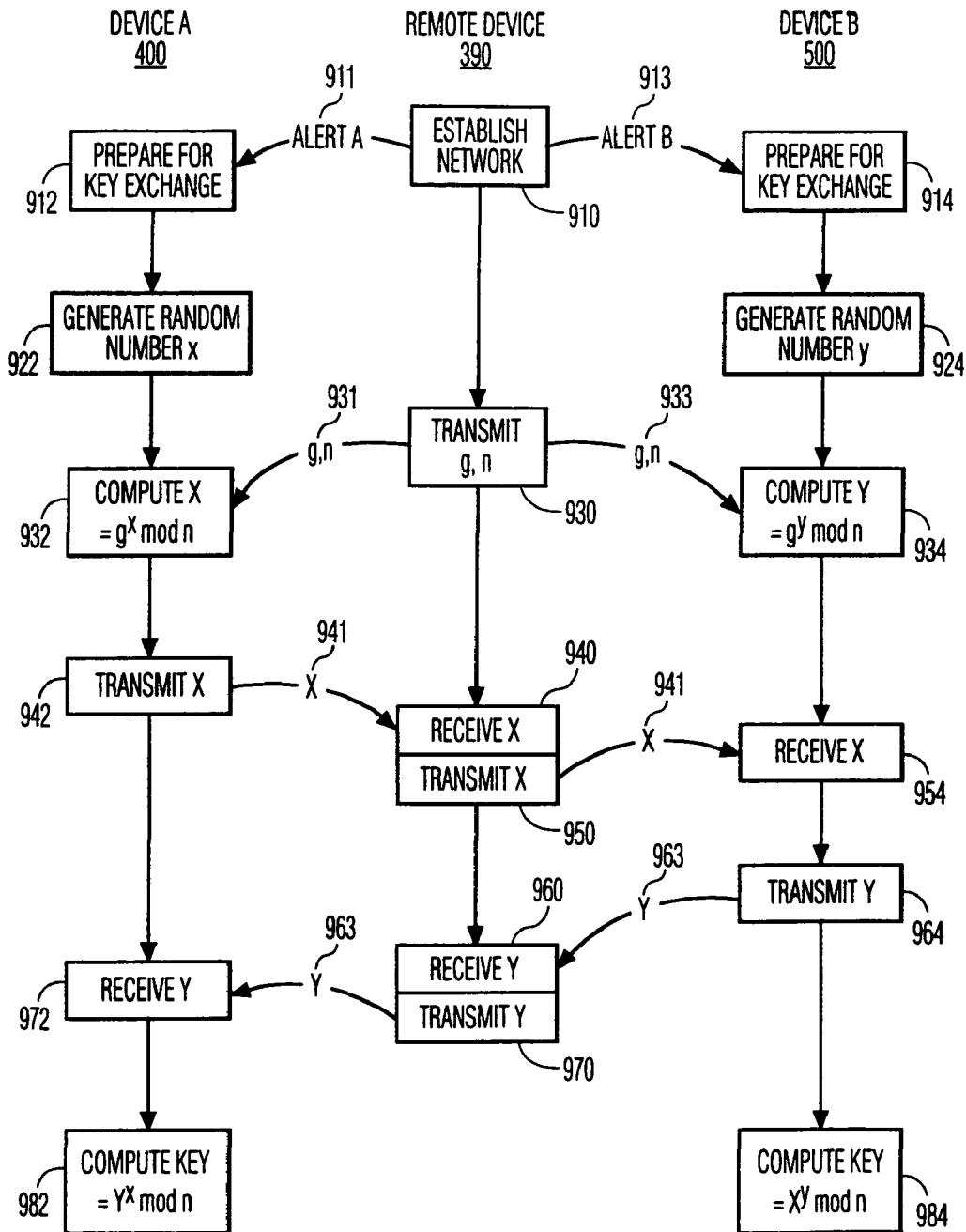


FIG. 5

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