



[24] **APPARATUS WITH METHOD FOR HIGH-SPEED VIDEO TAPE REPLICATION FROM MASTER DISK**

[25] **Inventors:** John G. Stern, San Jose, Calif.;
Bernice Ann, Washburn, N.J.; David M.
Robinson, Santa Ana, Calif.

[26] **Assignee:** Eastlab, Inc., Irvine, Calif.

[27] **Appl. No. 86,546**

[28] **Filed:** May 9, 1968

Related U.S. Application Data

[29] **Continuation of Ser. No. 87,838, May 27, 1968, also abandoned.**

[30] **Int. Cl. 7:** H04N 5/00, H04N 6/00

[31] **U.S. Cl.:** 348-250, 348-311,
348-327, 348-363, 348-363-200, 348-363-202

[32] **Field of Search:** 348-250, 311, 312, 314,
348-327, 348, 363, 363-200, 363, 363-202, 363-203, 363-204, 363-205, 363-206

References Cited

U.S. PATENT DOCUMENTS

3,038,616 7/1962 Dealy et al. 348-250

3,175,875 10/1964 Stevens et al. 348-250

3,282,034 7/1968 Stern, et al. 348-250

FOREIGN PATENT DOCUMENTS

1,960,577 7/1968 European Pat. Off. 348-250

Primary Examiner—Sammy Day

Attorney Examiner—Elio Trevis
Attorney Agent—Firm—Arthur W. Foxworth

[33] ABSTRACT

A laser video disk master is operated at 2x speed for duplicating video information to be recorded in VHS format. Two laser disk video players are modified to operate in synchronism in order to multiplex frame one to the other in duplicating video programs of length equal to the two recorded disks. The 2x frequency NTSC format video output signal is then demodulated, drop out detection is performed, and the digitally encoded video audio information is separated, error corrected, and converted by digital to analog (D/A) conversion in left and right channels of stereo audio information. The left and right channels of audio information are processed simultaneously to an FM modulator for transmission to existing video heads and to a 2x Dolby processor for transmission to laser heads. The demodulated 2x video information is converted to digital information by an analog to digital (A/D) converter and then time-base corrected and drop out error corrected. This error and timing signal in digital form are combined into the digital video signal, and digital color-coding circuit processing and digital luminance color reduction processing are performed. The 2x composite base line corrected and color-coding processed video signal is then D/A converted to analog form for 2x speed duplication of VHS cassette tapes. With suitable buffering, the signal may be processed in a bank of VHS recorders.

4 Claims, 4 Drawing Sheets

